# SITE HEALTH AND SAFETY PLAN (HASP)

Office:	DOH	
Site Name:	ame: South Dayton Dump Vapor Intrusion	
Client:	USEPA, Region V	
Work Location: Dryden Road, Moraine, OH		
<b>WO#:</b> 20405.012.001.2219.00		
DCN:		

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SITE HEALTH AND SAFETY PLAN (HASP)					
Prepared by: I	Dave Robinson	W.O. Number: 20405.012.001.2219.00	Date: 7/29/2013		
Project Identifi	cation	Site History: Starting in 1935 sand and gravel was excava			
Office:	DOH ISIN	between 1941 and 1996, municipal and industrial wastes were buried during landfill			
Site Name:	South Dayton Dump Landfill	operations. Between 1950 and 1970, drummed waste was acce document the acceptance of hazardous waste. In 2000, buried			
		a limited removal action took place. Drums that were removed of			
		PCB), benzene, chlorobenzene, ethylbenzene, toluene, TCE, vii			
		High levels of copper, lead, and cadmium have also been docur site was proposed for the National Priorities List (NPL) of Super			
		In March of 2012, U.S. EPA oversaw subslab vapor intrusion sa			
OII 4		responsible parties which yielded high levels of VOCs (especiall	y TCE) and methane in		
Client:	U.S. EPA 1975 Dryden Road,	several commercial/industrial buildings near the site.			
Work Location					
Scope of Work	: START will collct sub-slab and indoor a	air samples in residences and from soil gas probes along			
		umma canisters and will be analyzed using EPA method	d TO-15. Additionally,		
	ee PRP contractor(s) collecting soil gas a				
	ly; site HASP not necessary. List person required. If required, provide utility	sonner nere and sign on below: lity notification agency, authorization number, and v	valid dates:		
□ Ounty nound		egulatory Status:	valid dates.		
Site regulatory sta		Safety Officer Manual (Required to be On-Site)			
CERCLA/SARA	RCRA Other Federal Agency	Based on the Hazard Assessment and Regulatory Status,			
☑ U.S. EPA	☐ U.S. EPA ☐ DOE	HASP(s) applicable to this project. Indicate below which S used and append the appropriate pages of this form along			
☐ State	☐ State ☐ USACE	☐ Stack Test ☐			
☐ NPL Site	NRC Air Force	☐ Air Emissions ☐ ☐ ☐			
☐ OSHA	☐ 10 CFR 20 ☐	Asbestos			
Hazard Communi	cation (Req'd See Attachment D)	☐ Industrial Hygiene ☐ ☐ ☐ ☐			
□ 1910					
Day favor diby	Review and	Approval Documentation:			
Reviewed by: SO/DEHSM/CEH	S David Robinson	The file	ate: 29-Jul-13		
00,021,000,021,	Name (Print)	Signature			
Environmental.	Dovid Robinson	Sant Hair	oate: 29-Jul-13		
Compliance Advis	Sor David Robinson Name (Print)	Signature	vale. <u>29-301-13</u>		
Approved by:	(*)	Cig. and C			
Project Manage			)ate:		
	Name (Print)	Signature			
In a coordanae with		ment and Equipment Selection:	ul, the FCO and/or the Cite		
		m and 29 CFR 1910.132, at the site prior to personnel beginning wo tective equipment selection outlined within this HASP is appropriate			
		m Manual Section 5, Personal Protection Program, for guidance.)			
⊠ FSO	John Sherrard		Date:		
	Name	Signature			
Site Manage     Site	er John Sherrard		Date:		
	Name	Signature			
	vironmental	Salphi-	00.1.140		
Compliance	David Robinson Name	Jane 11 t	Date: <u>29-Jul-13</u>		
Dangerous	Goods Shipping				
Coordinato			Date:		

Name

Project start date: 29-Jul-13		This site HASP must be	Amendment date(s)	By:
End date:	30-Jun-14	reissued/reapproved for any activities conducted after:	1.	
		Date: 28-Jul-14	2.	



# BEHAVIOR-BASED SAFETY (BBS) - Pledge

#### I Accept and Understand 100% Safe Work Is an Achievable Goal

- ★ I will work to develop strong connections and team with my co-workers to establish a culture of working safely 100% of the time.
- ★ I will actively care about all Weston employees, our families, team contractors and clients.
- ★ I will help to keep our projects safe and will meet and exceed compliance requirements.
- ★ I will understand and comply with the Health and Safety Plan, Accident Prevention Plan, and Environmental Compliance Plan for each field project. They guide my actions.
- ★ I will stop any work that presents an imminent hazard to people or the environment or is not adequately addressed in the Health and Safety Plan, Accident Prevention Plan, or Environmental Compliance Plan.
- ★ I will identify changing conditions to address safety implications. No surprises!
- ★ I will identify unsafe working conditions and be proactive in correcting them.
- ★ I will coach and mentor and will accept coaching from others to encourage safe work behaviors.
- ★ I am empowered to share lessons-learned and foster continuous improvement.

#### I will Learn where I can get Assistance

- ★ I will develop high quality relationships with my Division Environmental, Health, and Safety (EHS) Manager; Profit Center Safety Officer; and Field Safety Officer.
- ★ I will learn how and when to contact our Environmental Advisors.
- ★ I will get to know our Corporate EHS staff and become familiar with the Corporate EHS Portal Site.

## I will Report All Incidents

- ★ If a safety incident occurs, even if there is no injury or damage but there could have been, I will report the incident immediately.
- ★ I will conduct safety reviews of all incidents with my supervisor, if requested. The review will focus on cause and lessons-learned so that we can be proactive in preventing it from happening again.

-

#### PROJECT QUALITY PLEDGE GUIDE

Living by our core value of "Exceptional Quality" means we deliver products and services that meet the highest standards. In doing so, we strive to identify, understand, and execute the project scope of work according to our clients' exceptional performance expectations. The Project Quality Pledge is the process we use to ensure our clients' exceptional performance expectations are met – every time.

This document provides guidance and links to examples for developing and executing a successful Project Quality Pledge. All Pledges will not be the same; what is important is that **your** Pledge makes sense to **your client and your team**. Project Quality Pledges can be very detailed (<u>PENREN</u>), or streamlined (<u>IAS</u>), depending on what works for your client and team. It can be a stand-alone document or incorporated into the Project Execution Plan or Project Instructions (Fort Sam).

The three most important aspects of the Project Quality Pledge are:

- Talk to your client frequently
- Understand your client's exceptional performance expectations
- Communicate client expectations to your team

#### **Talk to Your Client**

You cannot know your clients' exceptional performance expectations without talking to them. We must initiate and sustain a dialog with our clients. The 'client' may include several stakeholders, so communication is essential.

- Focus on exceptional performance expectations in all project phases (proposal to completion).
- Hold regularly-scheduled discussions with the client to ask about Weston performance.
- Schedule client-Weston meetings if any key client contacts change.
- o Review/revise quality goals if client expectations change.
- o Document and address client issues or suggestions and share with your team.

#### **Understand Your Clients' Exceptional Performance Expectations**

At its very basic level, the Pledge should identify our overall commitment to the client, including a statement describing that commitment (Surf City). Ask yourself, what is the shared vision?

- Define the clients' exceptional performance expectations. These expectations translate into one or more goals included in the Pledge (<u>EcoTourism</u>). Inquire about any sustainability goals the client may have and discuss how our project could incorporate these goals.
- o Develop the Project Quality Pledge. The lead for this effort is typically the CSM or PM.
- Identify and link WESTON and client contacts to ensure zippered communication.
   These contacts can be recorded in the Pledge or elsewhere; the important point is to link Weston and client contacts (Sherwin Williams).

#### **Communicate Client Expectations to Your Team**

In order to meet our client's exceptional performance expectations, we must secure the project team's commitment to those expectations. Each team member should not only understand the Project Quality Pledge, but should also be able to articulate it to others and identify his/her specific role in achieving it.

- o Discuss the Pledge at the kickoff meeting & regularly scheduled project meetings.
- o Ensure each team member understands the Pledge, and his/her specific role.
- Have team members sign the Pledge. The Pledge can define each person's specific role along with their signature (<u>IAS</u>), or provide a signature page for the overall pledge (<u>EcoTourism</u>).

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#### **ATTACHMENTS**

ATTACHMENT A Chemical Contaminants Data Sheets

ATTACHMENT B Safety Data Sheets

**ATTACHMENT C** Safety Procedures/Field Operating Procedures (FLD Ops)

ATTACHMENT D Hazard Communication Program

ATTACHMENT E Air Sampling Data Sheets

ATTACHMENT F Incident Reporting
ATTACHMENT G Traffic Control Plan

ATTACHMENT H Environmental Health & Safety Inspection Checklist

ATTACHMENT I Hazard Checklist (Single Page)

**ATTACHMENT J** Audit and Other Forms

## 1. PERSONNEL ON SITE INFORMATION

Organization/Branch	Name/Title	Address	Telephone
Dynamac / COH	John Sherrard / PM	4710A Interstate Drive	513-860-9102 (office)
•		Cincinnati, OH 45246	513-703-3092 (mobile)
Weston Solutions,	Dave Robinson / Project	711 E Monument Ave., #201	937-531-4400
Inc./DOH	Scientist	Dayton, OH 45402	937-572-3630 (mobile)
Weston Solutions.	Greg Roussos / Project	711 E Monument Ave., #201	937-531-4400
Inc./DOH	Scientist	Dayton, OH 45402	513-604-4797 (mobile)

#### Roles and Responsibilities:

John Sherrard - PM & FSO

1.2 WESTON SUBCONTRACTORS			
Organization/Branch	Name/Title	Address	Telephone
	Name:	Street:	
	Title:	City:	
		State, Zip:	
	Name:	Street:	
	Title:	City:	
		State, Zip:	
	Name:	Street:	
	Title:	City:	
		State, Zip:	

#### Roles and Responsibilities:

#### SITE-SPECIFIC HEALTH AND SAFETY PERSONNEL

The Site Field Safety Officer (FSO) for activities to be conducted at this site is: John Sherrard

The Site Manager has ultimate responsibility for ensuring that the provisions of this Site HASP are adequate and implemented in the field.

Changing field conditions may require decisions to be made concerning adequate protection programs. Therefore, the personnel assigned as FSOs must be experienced and meet the additional training requirements specified by OSHA in 29 CFR 1910.120.

#### Qualifications:

OSHA 40-hr Hazwoper, 8-hr Hazwoper Refresher current, First Aid/CPR, 8-hr Site Health & Safety Coordinator (FSO) course, Bloodborne Pathogens training.

Designated alternates include: Dave Robinson, Greg Roussos

1.3 SITE PERSONNEL AND CERTIFICATION STATUS					
1.3.1 WESTON Employee Certification					
Name: John Sherrard Title: Project Manager Task(s): All	Name: Dave Robinson Title: Project Scientist Task(s): All				
Certification Level or Description:       B-S, B-T	Certification Level or Description: B-S, B-T				
Name: Greg Roussos Title: Project Scientist Task(s): All Certification Level or Description: D-S, B-T	Name: Title: Task(s): Certification Level or Description:				
	☐ Medical Current ☐ Training Current ☐ Fit Test Current (Qual.) ☐ Fit Test Current (Quant.)				
Name: Title: Task(s): Certification Level or Description:  Medical Current Fit Test Current (Quant.)  Training Current Fit Test Current (Quant.)	Name: Title: Task(s): Certification Level or Description:  Medical Current Fit Test Current (Quant.)  Name: Training Current Fit Test Current (Quant.)				
Name: Title: Task(s): Certification Level or Description:  Medical Current Fit Test Current (Quant.)  Training Current Fit Test Current (Quant.)	Name: Title: Task(s): Certification Level or Description:  Medical Current Fit Test Current (Quant.)  Training Current Fit Test Current (Quant.)				
Name: Title: Task(s): Certification Level or Description:	Name: Title: Task(s): Certification Level or Description:				
Medical Current  Fit Test Current (Qual.)  Name:  Training Current  Fit Test Current (Quant.)	Medical Current Training Current  Fit Test Current (Qual.)  Name:				
Title: Task(s): Certification Level or Description:	Title: Task(s): Certification Level or Description:				
Medical Current Training Current Fit Test Current (Qual.) Fit Test Current (Quant.)	Medical Current Training Current Fit Test Current (Qual.)  Fit Test Current (Quant.)				

TRAINING CURRENT - Training: All personnel, including visitors, entering the exclusion or contamination reduction zones must have certifications of completion of training in accordance with OSHA 29 CFR 1910, 29 CFR 1926, or 29 CFR 1910.120.

FIT TEST CURRENT - Respirator Fit Testing: All persons, including visitors, entering any area requiring the use or potential use of any tight-fitting respirator must have had, as a minimum, a qualitative fit test, administered in accordance with OSHA 29 CFR 1910.134 or ANSI, within the last 12 months. If site conditions require the use of a full-face, tight-fitting, air-purifying respirator for protection from asbestos or lead, employees must have had a quantitative fit test, administered according to OSHA 29 CFR 1910.1001 or .1025 or 29 CFR 1926.1101 or .62, within the last 12 months.

MEDICAL CURRENT - Medical Monitoring Requirements: All personnel, including visitors, entering the exclusion or contamination reduction zones must be certified as medically fit to work and able to wear a respirator, if appropriate, in accordance with 29 CFR 1910 or 29 CFR 1926 (substance-specific), or 29 CFR 1910.120 (HAZWOPER).

The Site Field Safety Officer is responsible for verifying all certifications and fit tests.

SITE PERSONNEL AND CERTIFICATION STATUS						
1.3.2 Subc	1.3.2 Subcontractor's Health and Safety Program Evaluation					
Name of Subcontractor: Address:						
Activities To Be Conducted by Subcon	tractor:					
Evaluation Criteria						
Medical Program meets OSHA/WESTON criteria	Personal Protective Equipm	ment available	On-site monitoring equipment available, calibrated, and operated properly			
Acceptable	Acceptable		Acceptable			
Unacceptable	Unacceptable		Unacceptable			
Comments:	Comments:		Comments:			
Safe Working Procedures clearly specified	Training meets OSHA/WES	STON criteria	Emergency Procedures			
Acceptable	Acceptable		Acceptable			
Unacceptable	Unacceptable		Unacceptable			
Comments:	Comments:		Comments:			
Decontamination Procedures	General Health and Safety evaluation	Program	Additional comments:			
Acceptable	Acceptable		Subcontractor has agreed to and will conform to the WESTON HASP for this			
Unacceptable	Unacceptable		project.			
Comments:	Comments:		Subcontractor will work under its own HASP, which has been accepted by Project PM.			
Evaluation Conducted by:			Date:			
Evaluation Source (SubTrack, etc.):						
	Subcontra	ictor				
Certifications for all subcontractor per	sonnel will be added to	the HASP prior	to beginning work.			
Name:		Name:				
Title:		Title:				
Task(s):		Task(s):				
Certification Level or Description:		Certification Level or Description:				
Medical Current	_Training Current	Medical CurrentTraining Current				
Fit Test Current (Qual.)	Fit Test Current (Quant.)	Fit Test Current (Qual.)				
Name:		Name:				
Title:		Title:				
Task(s):		Task(s):				
Certification Level or Description:		Certification Le	evel or Description:			
Medical Current	_Training Current	Medical Current	Training Current			
Fit Test Current (Qual.)	Fit Test Current (Quant.)	Fit Test Current (0	Qual.) Fit Test Current (Quant.)			

## 2. HEALTH AND SAFETY EVALUATION

2.1 HEALTH AND SAFETY EVALUATION						
2.1.1 Task Hazard Assessment						
Background	d Review: 🛚	Complete	☐ Partial If par	tial why?		
Activities	Covered U	nder This	Plan:			
No.	Task/Su	btask		Description		Schedule
1	Sampling			ndoor air vapor intrusion 0-15 canisters with 24-ho d for the sampling.		July – Sept. '12
2	Sampling		TO-15.	and conduct sampling b		July – Sept '12
3	Oversight		Oversight of PRP con intrusion sampling	tractor's soil gas and vap	oor	July 2013-Jun 2014
Types of Numbers re hazard class	efer to one of t	the following	g hazard evaluation forms	. Complete hazard evaluati	on forms for	each appropriate
Physioche	mical 1	Chemical	ly Toxic 1	Radiation 3	Biological	2
☐ Flamma	able		tion 🛛 Carcinogen	lonizing:	☐ Etiologi	cal Agent
	ve		ion   Mutagen	☐ Internal exposure	Other (	plant, insect, animal)
☐ Corrosi	ve	□ Conta	ct	☐ External exposure		
☐ Reactiv	e		otion			
O <sub>2</sub> Rich	1	⊠ OSHA	1910.1000 Substance	Non-ionizing:	☐ Physic	al Hazards 4
O <sub>2</sub> Defi	cient	(Air C	ontaminants)	UV IR		uction Activities
					Consuc	action Activities
			Specific Hazard ance Standard	RF MicroW		
		(Refer	to following page for	Laser		
		listing				
	(	Source/Lo	cation of Contaminan	ts and Hazardous Sub	stances:	
_	elated to Tasi	<b>KS</b>	Indirectly Related to Members:	to Tasks — Nearby Proce	ss(es) That	Could Affect Team
⊠ Air			☐ Client Facility/W	ESTON Work Location		
Other Surface			☐ Nearby Non-Clie			
☐ Groundwater			Describe:	· <b>y</b>		
⊠ Soil						
☐ Surface Water			Have activities (	task[s]) been coordinated w	vith facility?	
	y Wastewater		Comments:	tack[0]) been cooldinated w	rial facility:	
☐ Process	s Wastewater			has coordinated all wor	rk with the	surrounding
Other _			stakeholders.	nas coordinated all Wol	r will life	surrounding

HEALTH AND SAFETY EVALUATION						
2.1.2 Chemical Hazards of Concern						
□ N/A				□ N/A		
Chemical Contaminants of Concern  Attach data sheets from an acceptable source such as NIOSH pocket guide, condensed chem dictionary, ACGIH TLV booklet, Hazardous Substances Data base (HSDB), etc. List chemicals concentrations below and locate data sheets in Attachment A of this HASP.				Identify hazardous materials used or on-si reagent type chemicals, solutions, or other performing tasks related to this project cou all subcontractors and other parties working chemicals and the location of the SDSs. Cof the hazardous materials they use or have List chemicals and quantities below and lo	r identified materials that in normal uld produce hazardous substances ng nearby are informed of the preso obtain from subcontractors and othe or on-site and identify location of the	use in Ensure that ence of these er parties, lists ne SDSs here.
Chemical Nar	ne	Concent (ug/r		Chemical N	ame	Quantity
1,1-Dichloroethane		3900 (soi				
Benzene		1000				
Chlorobenzene		3100				
Chloroform		530				
cis-1,2-Dichloroethene		41000 2300				
Ethylbenzene		5600				
m&p-Xylenes o-Xylene						
Trichloroethene		5000 30000				
Vinyl chloride		4400				
Methane		6.6%	V			
	OSHA-SI	PECIFIC H	AZARDO	OUS SUBSTANCES		
1910.1001 Asbestos	1910.1002 Coal tar pitch volát	iles	<u> </u>	1003 4-Nitrobiphenyl, etc.	1910.1004 alpha-Naphthylar	nine
1910.1005 [Reserved]	1910.1006 Methyl chlorometh	yl ether	<u> </u>	1007 3,3'-Dichlorobenzidine (and its salts)	1910.1008 bis-Chloromethyl	ether
1910.1009 beta-Naphthylamine	1910.1010 Benzidine		1910.1011 4-Aminodiphenyl		1910.1012 Ethyleneimine	
1910.1013 beta-Propiolactone	1910.1014 2-Acetylaminofluor	ene	1910.1015 4-Dimethylaminoazobenzene		1910.1016 N-Nitrosodimethy	lamine
1910.1017 Vinyl chloride			<u> </u>	1025 Lead (Att. FLD# 46)	1910.1026 Chromium VI (att	. FLD 53)
1910.1027 Cadmium (Att. 50 FLD)	1910.1028 Benzene (Att. FLD	# 54 or 61)	<u> </u>	1029 Coke oven emissions	1910.1043 Cotton dust	
1910.1044 1,2-Dibromo-3-chloropropane	1910.1045 Acrylonitrile		<u> </u>	1047 Ethylene oxide	1910.1048 Formaldehyde	
1910.1050 Methylenedianiline	1910.1051 1,3 Butadiene		<u> </u>	1052 Methylene chloride	1926.60 Methylenedianiline	
1926.62 Lead	1926.1101 Asbestos (Att. FLD	52)	1926.	1127 Cadmium	·	

HEALTH AND SAFETY EVALUATION					
2.1.3 Biological Hazards of Concern					
Poisonous Plants (FLD 43-D)	☐ Insects (FLD 43-B)				
Location/Task No(s) <b>All</b> Source:	Location/Task No(s) All  Source:				
Team Member(s) Allergic: Yes No Immunization required: Yes No					
Snakes, Reptiles (FLD 43-A)	Animals (FLD 43-A)				
Location/Task No(s) All  Source:	Location/Task No(s) All  Source:				
Team Member(s) Allergic: Yes No Immunization required: Yes No					
FLD 43 — WESTON Biohazard Field Operating Pr	rocedures: Att. OP				
☐ Sewage	☐ Etiologic Agents (FLD −C)(List)				
Location/Task No.(s):  Source:	Location/Task No.(s):  Source:				
Team Member(s) Allergic: Yes No Immunization required: Yes No					
Tetanus Vaccination within Past 10 yrs: Yes No Potential contact with used medical devices from illic					
FLD 43-C — Mold and Fungus. Att. OP					
FLD 44 — WESTON Bloodborne Pathogens Expos	sure Control Plan – First Aid Procedures: Att. OP				
FLD 45 — WESTON Bloodborne Pathogens Expos	sure Control Plan – Working with Infectious Waste: Att. OP				

				HE	ALTH	I AND SAFE	TY EVALUAT	TION		
				2	2.1.4	· Radiation Ha	zards of Conce	rn		
	NONIONIZING RADIATION									
Task No.	Type of Nonionizing Radiation		Source C	n-Site	TLV/	PEL	Wavelength Range	Control Measures	Monitoring Inst	rument
	Ultraviolet		Solar					Appropriate clothing/ sunscreen	None	
	Infrared									
	Radio Frequency	,								
	Microwave									
	Laser									
					,	IONIZING RA	ADIATION			
Task No.	Radionuclide		ajor adiations	Radioactiv Half-Life (Years)	ve	DAC (μCii/mL)	w	Y	Surface Contamination Limit	Monitoring Instrument

#### **HEALTH AND SAFETY EVALUATION**

## 2.1.5 Physical Hazards of Concern (Note: Check related RAVS-FLDs for Oil & Gas Clients)

Physical Hazard Condition	Physical Hazard	Attach OP	WESTON OP Titles
Loud noise	Hearing loss/disruption of communication		Section 7.0 - ECH&S Program Manual Occupational Noise & HC Program
Inclement weather	Rain/humidity/cold/ice/snow/lightning		FLD02 - Inclement Weather
Steam heat stress	Burns/displaced oxygen/wet working surfaces		FLD03 - Hot Process - Steam
Heat stress	Burns/hot surfaces/low pressure steam		FLD04 - Hot Process - LT3
Ambient heat stress	Heat rash/cramps/exhaustion/heat stroke		FLD05 - Heat Stress Prevention/Monitoring
Cold stress	Hypothermia/frostbite		FLD06 - Cold Stress
Cold/wet	Trench/paddy/immersion foot/edema		FLD02 - Inclement Weather
Confined spaces	Falls/burns/drowning/engulfment/electrocution		FLD08 - Confined Space Entry
Industrial Trucks	Fork Lift Truck Safety		FLD09 – Powered Industrial Trucks
Improper lifting	Back strain/abdomen/arm/leg muscle/joint injury		FLD10 - Manual Lifting/Handling Heavy Objects
Uneven surfaces	Vehicle accidents/slips/trips/falls		FLD11 - Rough Terrain
Poor housekeeping	Slips/trips/falls/punctures/cuts/fires		FLD12 - Housekeeping
Structural integrity	Crushing/overhead hazards/compromised floors		FLD13 - Structural Integrity
Improper cylinder. handling	Mechanical injury/fire/explosion/suffocation		FLD16 - Pressure Systems - Compressed Gases
Water hazards	Poor visibility/entanglement/drowning/cold stress		FLD17 - Diving
Water hazards	Drowning/heat/cold stress/hypothermia/falls		FLD18 - Operation and Use of Boats
Water hazards	Drowning/frostbite/hypothermia/falls/electrocution		FLD19 - Working Over Water
Vehicle hazards	Struck by vehicle/collision		FLD20 - Traffic
Explosions	Explosion/fire/thermal burns		FLD21 - Explosives
Moving mechanical parts	Crushing/pinch points/overhead hazards/electrocution		FLD22 – Earth Moving Equipment
Moving mech. parts	Overhead hazards/electrocution		FLD23 – Cranes, Rigging, and Slings
Working at elevation	Overhead hazards/falls/electrocution		FLD24 - Aerial Lifts/Man lifts
Working at elevation	Overhead hazards/falls/electrocution		FLD25 - Working at Elevation
Working at elevation	Overhead hazards/falls/electrocution/slips		FLD26 - Ladders
Working at elevation	Slips/trips/falls/overhead hazards		FLD27 - Scaffolding
Trench cave-in	Crushing/falling/overhead hazards/suffocation		FLD28 - Excavating/Trenching
Physiochemical	Explosions/fires from oxidizing, flam./corr. material		FLD30 - Hazardous Materials Use/Storage
Physiochemical	Fire and explosion		FLD31 - Fire Prevention/Response Plan Required
Physiochemical	Fire		FLD32 - Fire Extinguishers Required
Structural integrity	Overhead/electrocution/slips/trips/falls/fire		FLD33 - Demolition
Electrical	Electrocution/shock/thermal burns		FLD34 - Utilities
Electrical	Electrocution/shock/thermal burns		FLD35 - Electrical Safety
Burns/fires	Heat stress/fires/burns		FLD36 - Welding/Cutting/Brazing/Radiography
Impact/thermal	Thermal burns/high pressure impaction/heat stress		FLD37 - Pressure Washers/Sand Blasting
Impaction/electrical	Smashing body parts/pinching/cuts/electrocution		FLD38 - Hand and Power Tools
Poor visibility	Slips/trips/falls		FLD39 - Illumination
Fire/explosion	Burns/impaction		FLD40 - Storage Tank Removal/Decommissioning
Communications	Disruption of communications		FLD41 - Std. Hand/Emergency Signals
Energy/release	Unexpected release of energy		FLD42 - Lockout/Tag-out
Biological Hazards	Biological Hazards at site	$\boxtimes$	FLD43 - Biological Hazards
Animals	Animals		FLD43A - Animals
Insects	Stinging and Biting Insects		FLD43B - Stinging and Biting Insects
Molds/Fungi	Molds and Fungi		FLD43C - Molds and Fungi
Hazardous Plants	Hazardous Plants	$\boxtimes$	FLD43D - Hazardous Plants
Etiologic Agents	Etiologic Agents		FLD43E - Etiologic Agents

2.1.5 Physical Hazards of Concern (Continued)					
Physical Hazard Condition	Physical Hazard	Attach OP	WESTON OP Titles		
Biological Hazards/BBP	Biological Hazards/BBP at site/First Aid Providers		FLD44 - Biological Hazards – Bloodborne Pathogens Exposure Control Plan – First Aid Providers		
Infectious Waste	Infectious Waste at site/BBP/ at site/Infectious Waste		FLD45 – Biological Hazards – Bloodborne Pathogens Exposure Control Plan – Work With Infectious Waste		
Lead Contaminated sites	Lead poisoning		FLD46 - Control of Exposure to Lead		
Puncture/cuts	Cuts/ dismemberment/gouges		FLD47 - Clearing, Grubbing and Logging Operations		
Government Inspector	Disruption of Operations		FLD48 – Federal, State, Local Regulatory Agency Inspections		
Unknown Chemicals	Exposure to hazardous materials/waste		FLD49 – Safe Storage of Samples		
Cadmium	Exposure Control		FLD50 – Cadmium Exposure Control Plan		
Process Safety Procedure	Safety Procedure		FLD51 – Process Safety Procedure		
Asbestos	Asbestos Exposure		FLD52 – Asbestos Exposure Control Plan		
Hexavalent Chromium	Exposure Control Plan		FLD53 – Hexavalent Chromium Exposure Control Plan		
Benzene	Exposure Control Plan		FLD54 - Benzene Exposure Control Plan		
Hydrofluoric acid	Working with HF		FLD55 – Working with Hydrofluoric Acid		
Moving drill rig parts	Crushing/pinch points/overhead hazards/electrocution		FLD56 – Drilling Safety		
Vehicles/driving	Accidents,/fatigue/cell phone use		FLD 57 – Motor Vehicle Safety		
Improper material handling	Back injury/crushing from load shifts/equipment/tools		FLD 58 – Drum Handling Operations		
COC decontamination	COCs/slip, trip, and falls/waste generation/environmental compliance/PPE		FLD59 - Decontamination		
Drilling hazards	Electrocution/overhead hazards/pinch points		Environmental Remediation Drilling Safety Guideline - 2005		
Fatigue	Long work hours		FLD60 – Employee Duty Schedule		
Benzene/Gasoline	Benzene exposure		FLD61 – Gasoline Contaminant Exposure		
Cardiac Arrest	Accident/Heart Attack		FLD62 – 2009 Automatic External Defibrillator (AED) Program Guidelines		
Ionizing Radiation	Ionizing Radiation		FLD63 – Using Handheld X-Ray Fluorescence (XRF) Analyzers		
Working Alone	Isolated Working Conditions	$\boxtimes$	FLD64 – Employees Working Alone		

## 3. SITE SECURITY

3.1 SITE SEC	URITY ASSESSMENT FORM	1		
	DESCRIPTION			
Site Name and Location: South Dayton Dump Landfill 1975 Dryden Road, Moraine, Ohio	Number of Employees and Subcontractor John Sherrard, Dave Robinson, Gre			
Type of Work: Installation of subslab vapor probes, indoo oversight of PRP contractor's vapor intrusion		or intrusion, and		
Projected Start Date: 07/2012	Projected Completion Date: 06/2014			
Are Chemicals Used or Stored That Meet DHS/CI http://www.dhs.gov/files/programs/gc_11859095701				
If Yes, Attach Plan and DHS Approvals to HASP. http://www.dhs.gov/files/programs/gc 11695014861	<u>97.shtm</u>			
SURROUNDING AREA (urban/suburban/rural; re		ıme, population density, etc		
The site is a closed landfill, surrounded by	light industrial and residential areas.			
THREAT INDICATORS (apparent social, econom	ic, political, ethnic, criminal, gang related,	and other risk factors)		
Spotcrime.com shows no reported major c	rimes within an approximate 1 mile ra	dius.		
COUNTERMEASURES (Current and projected ris	sk mitigation factors)			
Security Systems (Reference Site Security Check None	klist):			
Security Procedures (Reference Site Security Ch None	ecklist):			
Closest police station location and contact information Police Department – 3 <sup>rd</sup> District 931 Washington Street Dayton, OH 45402 (937) 333-8950	mation:			
Other relevant observations or information to fact According to SpotCrime.com, there have be		ar the project site area.		
OVERALL SECURITY ASSESSMENT (Submit "M				
Risk Level: 🛛 Low 🔲 Medium	☐ High	Date: 29-Jul-13		
Site Safety Officer: John Sherrard Division Safety Manager: Ted Deecke				
USE ATTACHMENTS FOR ADDITIONAL COM	MMENTS, MAPS AND DIAGRAMS			

## 3.2 WESTON SITE SECURITY CHECKLIST

To be used for completing the Site Security Assessment Form required on all WESTON projects. Contact Corporate Security for guidance on any items that are "NEEDED" and "NOT IN PLACE".

CONTROL MEASURES:		In-Place / Not In-Place	Needed / Not Needed
1.	Fencing, lockable gates, no holes (enter details below):		
	a. Chain Link material		
	b. Other material (describe)		
	c. Height (in feet and inches)		
	d. Top cover (e.g., razor wire)		
	e. Signage (e.g., No Trespassing)		
2.	Guard service:		□ / 🛛
	a. During working hours?		
	b. During non-working hours?		$\square$ / $\square$
	c. As a stationary post?		
	d. As a roving patrol?		
	e. Do they have written instructions?		
	f. Do they have adequate training?		
	g. Do they have adequate supervision?		
	h. Do they have daily reports?		
	i. Do they have daily inspections?		
3.	ID badges displayed by:	⊠ / □	
	a. Employees?	$\boxtimes$ / $\square$	
	b. Contractors?		
	c. Visitors?		
4.	Log books for:	<u> </u>	
	a. Employee sign-in?	$\boxtimes$ / $\square$	
	b. Visitor sign-in?	$oxed{\boxtimes}$ / $oxed{\square}$	
	c. Vehicle sign-in?		
	d. Incident reports?		
	e. Property removal?		
	f. Keys and access cards?		
5.	Electronics and hardware options (enter details below):		□ / 🛛
	a. Access card readers		
	b. Adequate lighting		
	c. Closed circuit TV		
	d. Alarm system		
	e. Other (describe)		
6.	Procedures documented for:		
	a. Security training?		
	b. Security instructions?		
	c. Contingency plans?		
	d. Opening and closing protocols?		
	e. Other (describe)?		
7.	Law enforcement liaison documented for:		
	a. Municipal police?		
	b. County sheriff?		
	c. State police?		
	d. Federal agencies (specify)?		

# WESTON SITE SECURITY CHECKLIST (CONTINUED) To be used for completing the Site Security Assessment Form required on all WESTON projects. Contact Corporate Security for guidance on any items that are "NEEDED" and "NOT IN PLACE". **CHAIN OF COMMAND:** 24/7 Contact Information Name Site Security Coordinator Dave Robinson 937-572-3630 Site Supervisor John Sherrard 513-703-3092 **Project Manager** John Sherrard 513-703-3092 PC Manager Sally Bartz 517-881-5264 REMARKS (use this section and supplemental pages to comment on details, exceptions or additional observations):

## 4. TASK BY TASK ASSESSMENT

#### 4.1 TASK-BY-TASK RISK ASSESSMENT

## 4.1.1 Task 1 Description

TASK 1: Conduct sub-slab and indoor air sampling in residential properties. These sample locations are situated above the groundwater plume. Samples will be collected and analyzed using USEPA Method TO-15 (summa canisters).					
	EQUI	IPMENT REQUIRED/U	JSED		
Drill / Masonry Bits GFI Extension Cord	HEPA Vacuum Tubing / Fittings	Level D PPE Log Book	Summa Canisters Camera	Hand Tools Helium Leak Chk System	
	РОТ	ENTIAL HAZARDS/RI	SKS		
		Chemical			
Mazard Present What justifies risk level? Methane has been mea constantly monitor %LE PDR for airborne dust) of above background during slab in residential baser of airborne silica-bearing	L of workspace. Direct during previous installations the work. Installation ments. A HEPA vacuu	rations in nearby subslater- ext-read instruments havation of sub-slab sampler on of sub-slab soil gas p	ab samples, multiRAE we been used extensivele ports and indicated notes will involve drilling	ly (ppbRAE for VOC, o detectable VOC's g through the concrete	
		Physical			
<ul><li>☑ Hazard Present What justifies risk level?</li><li>Handtools, slips, trips, a prior to any sub slab dri</li></ul>	☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level?  Handtools, slips, trips, and falls. Awareness of hazards will minimize risk. Utilities should be checked and marked				
		Biological			
<ul> <li>✓ Hazard Present</li> <li>What justifies risk level?</li> <li>Possible presence of possible avoidance of poisonous</li> </ul>		toes, rodents, and other		n of hazards and	
		RADIOLOGICAL			
☐ Hazard Present ☐ H☐ M☐ L  What justifies risk level?  Minimal risk from sunlight – PPE and/or sunscreen will minimize risk.					
LEVELS OF PROTECTION/JUSTIFICATION					
Level D PPE – Hardhat, Safety Glasses, Steel- or Composite-Toe Boots, Class II or III Reflective Vest.					
S	AFETY PROCEDURE	S REQUIRED AND/OF	R FIELD OPS UTILIZE	D	
All work will be performed in accordance with the provisions of this HASP, OSHA guidelines, and WESTON Standard Operating Procedures.					

# TASK-BY-TASK RISK ASSESSMENT (Continued)

# 4.1.2 Task 2 Description

TASK 2: Installation and sampling of soil gas probes outdoors near the landfill: START will oversee a subcontractor drilling firm during installation of direct-push soil gas probes in six locations near the landfill. Twelve soils probes will be installed in six locations with 4ft and 8ft depth probes colocated in six flush-mount monitoring well casings.

located in six flush-mount monitoring well casings.					
EQUIPMENT REQUIRED/USED					
TO-15 canisters, He		and Tools ogbook	Camera Utility Locating subcontractor		
	POTEN	TIAL HAZARI	DS/RISKS		
		Chemical			
%LEL of workspace. Direct-re previous installation of soil gas	ead instruments have been sports and indicated no continuated in the c	en used extensi detectable breat			
		Physical			
Mazard Present  Risk Level: ☐ H ☐ M ☐ L  What justifies risk level?  Handtools, slips, trips, and falls. Awareness of hazards will minimize risk. Underground utilities will be marked out by Ohio OUPS and additionally by a subcontract utility locate firm prior to any drilling. All safety features of the Geoprobe drill rig will be utilitized. The subcontract drilling firm will provide any necessary traffic control and warning signs, cones, etc. Local officials (City of Moraine) have requested that any work within 5 feet of the curb will be marked along the curb with traffic cones.  Biological  Hazard Present  Risk Level: ☐ H ☐ M ☐ L  What justifies risk level?  Possible presence of poison ivy, ticks, mosquitoes, rodents, and other animals. Recognition of hazards and avoidance of poisonous plants will minimize risks.					
	F	RADIOLOGIC	CAL		
LEVELS OF PROTECTION/JUSTIFICATION					
Level D PPE will be utilized for the work – Hardhat, safety glasses, steel- or composite-toe boots, reflective traffic vest and hearing protection (as needed) during drilling activities.					
SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED					
All work will be performed in accordance with the provisions of this HASP, OSHA guidelines, and WESTON Standard Operating Procedures.					

# 4.1 TASK-BY-TASK RISK ASSESSMENT (Continued)

## 4.1.3 Task 3 Description

**TASK 3:** Oversight of PRP contractor's soil gas and vapor intrusion sampling. The PRP's contractor will be installing sampling ports and collecting sub-slab and indoor air samples from residential and commercial properties in the vicinity of the site.

properties in the vicinity of the site.				
EQUIDMENT DEQUIDED/USED				
Level D PPE Logbook Camera				
POTENTIAL HAZARDS/RISKS				
Chemical				
Hazard Present Risk Level: H M L L What justifies risk level? Risk of exposure to airborne contaminants is low. Sub-slab and indoor air concentrations of volatile organics expected to be low and the potential for active intrusion into the house is low. There is risk of exposure to airborne crystalline silica during installation of the sampling port in the concrete floor. START will maintain an adequate standoff from the active drilling work.				
Physical				
☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level? Handtools, slips, trips, and falls. Awareness of hazards will minimize risk. Utilities should be checked and marked prior to any sub slab drilling.				
Biological				
RADIOLOGICAL				
Hazard Present Risk Level: H M L What justifies risk level? Minimal risk from sunlight – PPE and/or sunscreen will minimize risk.				
LEVELS OF PROTECTION/JUSTIFICATION				
Level D PPE. Hearing protection should be employed during drilling activities.				
SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED				
All work will be performed in accordance with the provisions of this HASP, OSHA guidelines, and WESTON Standard Operating Procedures.				

4.1 TASK-BY-TASK RISK ASSESSMENT (Continued)			
4.1.4 Task 4 Description			
TASK 4:			
EQUIPMENT REQUIRED/USED			
POTENTIAL HAZARDS/RISKS			
Chemical  Hazard Present Risk Level: H M L  What justifies risk level?			
Physical			
☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level?			
Biological			
☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level?			
RADIOLOGICAL			
☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level?			
LEVELS OF PROTECTION/JUSTIFICATION			
SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED			
All work will be performed in accordance with the provisions of this HASP, OSHA guidelines, and WESTON Standard Operating Procedures.			

4.1 TASK-BY-TASK RISK ASSESSMENT (Continued)			
4.1.5 Task 5 Description			
TASK 5:			
EQUIPMENT REQUIRED/USED			
POTENTIAL HAZARDS/RISKS			
Chemical  Hazard Present Risk Level: H M L  What justifies risk level?			
Physical			
☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level?			
Biological			
☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level?			
RADIOLOGICAL			
☐ Hazard Present Risk Level: ☐ H ☐ M ☐ L What justifies risk level?			
LEVELS OF PROTECTION/JUSTIFICATION			
SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED			
All work will be performed in accordance with the provisions of this HASP, OSHA guidelines, and WESTON Standard Operating Procedures.			

4.2 PERSONNEL PROTECTION PLAN					
Engineering Controls Describe Engineering Controls used as part of Personnel Protection Plan:					
Task(s)					
All Use of HEPA-filtered va	Use of HEPA-filtered vacuum during concrete drilling activities.				
Administrative Controls  Describe Administrative Controls used as part of	Personnel Protection Plan:				
Task(s) All Maintain adequate clea	rance from all contractor wo	rk to avoid physical and airborne contaminant hazards			
7.11					
Personal Protective Equipment Action Levels for Changing Levels of Protection.	Refer to Site Air Monitoring Program—A	ction Levels. Define Action Levels for up or down grade for each task:			
Task(s) All Level D PPE;					
	Description of Leve				
Level D		Level D Modified			
Task(s): All					
Task(s): All  ☑ Head	Hardhat	Level D Modified  Task(s):  Head			
Task(s): All	·	Level D Modified  Task(s):			
Task(s): All  ☑ Head ☑ Eye and Face	Hardhat Safety Glasses	Level D Modified  Task(s): Head Eye and Face			
Task(s): All  ☐ Head ☐ Eye and Face ☐ Hearing	Hardhat Safety Glasses	Level D Modified  Task(s): Head Eye and Face Hearing			
Task(s): All  ☐ Head  ☐ Eye and Face ☐ Hearing ☐ Arms and Legs Only	Hardhat Safety Glasses Ear Plugs, as needed As needed during hand	Level D Modified  Task(s): Head Eye and Face Hearing Arms and Legs Only			
Task(s): All  ☐ Head  ☐ Eye and Face  ☐ Hearing  ☐ Arms and Legs Only  ☐ Appropriate Work Uniform	Hardhat Safety Glasses Ear Plugs, as needed	Level D Modified  Task(s): Head Eye and Face Hearing Arms and Legs Only Whole Body			
Task(s): All  ☐ Head  ☐ Eye and Face  ☐ Hearing  ☐ Arms and Legs Only  ☐ Appropriate Work Uniform  ☐ Hand – Gloves	Hardhat Safety Glasses Ear Plugs, as needed As needed during hand tool use	Level D Modified  Task(s): Head Eye and Face Hearing Arms and Legs Only Whole Body Apron			
Task(s): All  ☐ Head  ☐ Eye and Face  ☐ Hearing  ☐ Arms and Legs Only  ☐ Appropriate Work Uniform  ☐ Hand – Gloves  ☐ Foot - Safety Boots	Hardhat Safety Glasses Ear Plugs, as needed As needed during hand tool use	Level D Modified  Task(s): Head Eye and Face Hearing Arms and Legs Only Whole Body Apron Hand - Gloves			
Task(s): All  ☐ Head  ☐ Eye and Face  ☐ Hearing  ☐ Arms and Legs Only  ☐ Appropriate Work Uniform  ☐ Hand – Gloves  ☐ Foot - Safety Boots  ☐ Fall Protection	Hardhat Safety Glasses Ear Plugs, as needed As needed during hand tool use	Level D Modified  Task(s): Head Eye and Face Hearing Arms and Legs Only Whole Body Apron Hand - Gloves Gloves			

4.3 DESCRIPTION OF LEVELS OF PROTECTION			
Level C	Level B ( ) or Level A ( )		
Task(s):	Task(s):		
☐ Head	Head		
☐ Eye and Face	☐ Eye and Face		
☐ Hearing	Hearing		
☐ Arms and Legs Only	☐ Arms and Legs Only		
☐ Whole Body	☐ Whole Body		
☐ Apron	☐ Apron		
☐ Hand – Gloves	☐ Hand - Gloves		
☐ Gloves	☐ Gloves		
☐ Gloves	☐ Gloves		
☐ Foot - Safety Boots	☐ Foot - Safety Boots		
☐ Outer Boots	☐ Outer Boots		
☐ Boots (Other)	☐ Boots (Other)		
☐ Half Face	SAR - Airline		
☐ Cart./Canister	□ SCBA		
☐ Full Face	☐ Comb. Airline/SCBA		
☐ Cart./Canister	☐ Cascade System		
☐ PAPR	☐ Compressor		
☐ Cart./Canister	☐ Fall Protection		
☐ Type C	☐ Flotation		
☐ Fall Protection	☐ Other		
☐ Flotation			
☐ Other			

# 5. MONITORING PROGRAM

5.1 SITE OR PROJECT HAZARD MONITORING PROGRAM						
5.1.1 Air Monitoring Instruments						
Instrument Selection and Initial Check Record Reporting Format: ☐ Field Notebook ☐ Field Data Sheets* ☐ Air Monitoring Log ☐ Trip Report ☐ Other						
	Task	Number	Number	Checked Upon		
Instrument RAD	No.(s)	Required	Received	Receipt	Comment	Initials
 ☐ GM (Pancake)						
☐ Nal (Micro R)						
ZnS (Alpha Scintillator)						
☐ Other						
⊠ PID						
☐ MiniRAE						
MultiRAE (LEL/O2/H2S/CO/PID)	1	All				
☐ TVA 1000 (PID/FID)						
☐ Other						
☐ FID						
☐ TVA 1000 (FID/PID)						
☐ Other						
PDR 1000 (Particulate)						
☐ Single Gas Meter (SGM)						
Specify Chemical:						
Personal Sampling Pump						
Specify Media:						
☐ Bio-Aerosol Monitor						
☐ Tubes/type:						
☐ Tubes/type:						
☐ Detector Tube Pump						
Pump Model: <u>Drager</u>	1	All				
Tube: <u>Benzene</u>	1 box	All				
Tube: Vinyl Chloride	1 box	All				
Tube:						

5.1 SITE OR PROJECT HAZARD MONITORING PROGRAM								
5.1.1 Air Monitoring Instruments Calibration Record								
Instrument, Mfg., Model, Equip. ID No.	Date	Time	Calib. Material	Calib. Method Mfg.'s	Other	Initial Setting and Reading	Final Setting and Reading	Calibrator's Initials

## **5.2 SITE AIR MONITORING PROGRAM**

#### **Action Levels**

These Action Levels, if not defined by regulation, are some percent (usually 50%) of the applicable PEL/TLV/REL. That number must also be adjusted to account for instrument response factors.

	Tasks	Action Level		Action	
Explosive or Flammable Atmosphere		Ambient Air Concentration	Confined Space Concentration		
		<10% LEL	0 to 1% LEL	Work may continue. Consider toxicity potential.	
		10 to 25% LEL	1 to 10% LEL	Work may continue. Increase monitoring frequency.	
		>25% LEL	>10% LEL	Work must stop. Ventilate area before returning.	
Oxygen		Ambient Air Concentration	Confined Space Concentration		
		<19.5% O <sub>2</sub>	<19.5% O <sub>2</sub>	Leave area. Re-enter only with self-contained breathing apparatus.	
		19.5% to 25% O <sub>2</sub>	19.5% to 23.5% O <sub>2</sub>	Work may continue. Investigate changes from 21%.	
		>25% O <sub>2</sub>	>23.5% O <sub>2</sub>	Work must stop. Ventilate area before returning.	
☐ Radiation		< 3 time	es background	Continue work.	
		3 times backg	Radiation above background levels (normally 0.01-0.02 mR/hr) signifies possible radiation source(s) present. Continue investigation with caution. Perform thorough monitoring. Consult with a Health Physicist.		
	> 1 mrem/hour			Potential radiation hazard. Evacuate site. Continue investigation only upon the advice of Health Physicist.	
☑ Organic Gases and Vapors		< 0.5 ppm above background	Level D PPE; above 0.5 ppm, measure benzene by Drager tube; if <0.5 ppm continue in Level D up to 10 ppm. > 10 ppm, STOP WORK, consult SO.		
		>0.5 ppm Vinyl Chloride	Stop work, consult SO for options to complete work.		
		Any visible emission installation	Stop Work – evaluate HEPA vacuum setup during drilling. Contact SO.		

#### 5.3 ACTION LEVELS

#### For Silica-Bearing Dusts:

Current OSHA PEL for silica = <u>30 mg/m3</u>

%SiO2 + 2

(@ 20% silica in dust, PEL = 1.36mg/m3)

2003 ACGIH TLV for silica = 0.05 mg/m3 (quartz dust)

Weston Action Level (0.5 x TLV) = 0.025 mg/m3

At an estimated 20% silica in concrete dust, action level based on PDR dust reading would be:

 $\underline{0.025 \text{ mg/m3}}$  = 0.125 mg/m3 airborne dust by PDR. 0.20

#### For the VOC's identified at the site:

Site: START - South Dayton Dump Vapor Intrusion

Safety Factor\* = 2 (Enter value between 2 and 10; if no value entered, defaults to 2)

	Exposure Limit		Weston Action	RAE Response	PID Action	
Contaminant	Conc.	Units	Level	Factor	Level	Comments
1,1-dichlorethane	100	ppm	50.0	NR	#VALUE!	2012 TLV
Benzene	0.5	ppm	0.3	0.53	0.47	2012 TLV
chlorobenzene	10	ppm	5.0	0.40	12.50	
chloroform	10	ppm	5.0	NR	#VALUE!	No Response on 10.6ev PID
cis-1,2-DCE	200	ppm	100.0	0.8	125.00	
Ethylbenzene	20	ppm	10.0	0.52	19.23	
Xylenes	100	ppm	50.0	0.44	113.64	
TCE	10	ppm	5.0	0.54	9.26	

<sup>\*</sup> Safety Factor: Use 2 if site is well characterized; use 3-10 depending on quality of and/or confidence in concentration data from site.

All exposure limits are 2012 TLV's

Response factor from RAE Systems Publication TN-106.

NR = No response on the PID with a 10.6 ev lamp.

#### **For Vinyl Chloride:**

2012 TLV = 1 ppm; Weston Action Level = 0.5 ppm (Drager tube or equiv.).

## 6. HOSPITAL INFORMATION

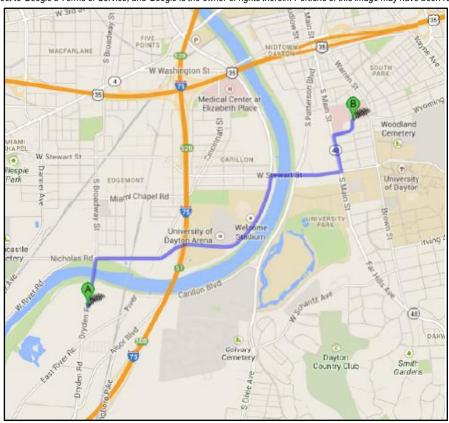
	6.1	CONTINGENC	ES			
	6.1.1 Emergency Contacts and Phone Numbers					
Agency	<u> </u>	Contact	Phone Number			
WorkCare WESTON Medical Director		Dr. Peter Greaney		Pacific Time call 800-455-6155 and dial 0		
		Heather Lind	for the Operator or ext. 475 for Heather Lind to request the on-ca clinician.			
After-Business Hours Contact (In Case of Emergency Only)			and Holidays call 800 answering service. Req	Pacific Time, all day Saturday, Sunday, -455-6155 Dial 3 to reach the after-hours uest that the service connect you with the n-call clinician will return your call within 30 minutes.		
WESTON Corporate EHS Director		William Irwin	610-701-5217 (office 267-918-8371 (cell)	610-701-5217 (office)		
WESTON Medical Programs Manager		William Irwin	610-701-5217 (office 267-918-8371 (cell)	610-701-5217 (office)		
WESTON Health & Safety Division Safety	y Manager	Ted Deecke	847-337-4147			
WESTON Health & Safety Local Safety C	Officer	Dave Robinson	937-572-3630 (mob	937-572-3630 (mobile)		
Fire Department		Dayton Fire	911 or (937) 333-4501 (non-emerg. #)			
Police Department		Dayton Police	911 or (937) 333-8950 (non-emerg. #)			
WESTON FSO Cell Phone		John Sherrard	513-703-3092 (mobile)			
WESTON PM Cell Phone		John Sherrard	513-703-3092 (mobile)			
Client Site Phone		OSC Steven Renninger	513-260-7849			
Site Telephone		John Sherrard	513-703-3092 (mobile)			
Nearest Telephone		TBD	TBD			
Poison Control			(800) 222-1222			
Local Medical Emergency Facility(s) - LMF						
Name of Hospital: Miami Valley Hosp	oital					
Address: 31 Wyoming Street, Dayton, OH				Phone No.: (937) 208-8000		
Name of Contact: Emergency Room				Phone No.:		
Type of Service: Route to Hospital:		Travel time from site:				
Physical trauma only (See Attached)			8 min			
Chemical exposure only				Distance to hospital: 2.6 miles		
Physical trauma and chemical exposure				Name/no. of 24-hr		
Available 24 hours ambulance service: 911			ambulance service: 911			

Secondary or Specialty Service Provider				
Name of Hospital: Grandview Hospital				
Address: 405 West Grand Avenue, Dayton, OH Phone No.: (937) 723-3200				
Name of Contact: Emergency Room		Phone No.:		
Type of Service:  Physical trauma only	Route to Hospital (see attached):	Travel time from site: 9 min		
Chemical exposure only		<b>Distance to hospital:</b> 3.8 miles		
Physical trauma and chemical exposure		Name/no. of 24-hr ambulance service:		
X Available 24 hours		911 <b>/</b>		

See reporting an incident in Attachment F.

#### 6.1.2 Hospital Map

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#### 1975 Dryden Rd, Moraine, OH 45439

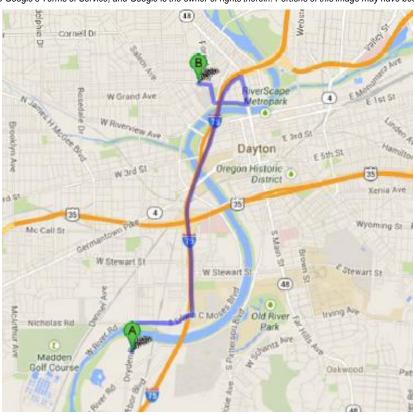
Head north on Dryden Rd toward Nicholas Rd	go 0.3 mi total 0.3 mi
2. Take the 1st right onto Nicholas Rd	go 0.2 mi total 0.5 mi
Continue onto S Edwin C Moses Blvd     About 3 mins	go 1.2 mi total 1.7 mi
4. Turn right onto W Stewart St     About 2 mins	go 0.4 mi total 2.2 mi
5. Turn left onto S Main St About 1 min	go 0.2 mi total 2.4 mi
6. Turn right onto Wyoming St	go 0.2 mi total 2.6 mi
7. Turn right to stay on Wyoming St Destination will be on the left	go 43 ft total 2.6 mi
Miami Valley Hospital: Bariatric Surgery Center 1 Wyoming St, Dayton, OH 45409	
	2. Take the 1st right onto Nicholas Rd  3. Continue onto S Edwin C Moses Blvd About 3 mins  4. Turn right onto W Stewart St About 2 mins  5. Turn left onto S Main St About 1 min  6. Turn right onto Wyoming St Destination will be on the left Miami Valley Hospital: Bariatric Surgery Center

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data @2013 Google

#### South Dayton Dump Site to Grandview Hospital

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#### A

#### 1975 Dryden Rd, Moraine, OH 45439

	Head north on Dryden Rd toward Nicholas Rd	go 0.3 mi total 0.3 mi
Ļ	2. Take the 1st right onto Nicholas Rd	go 0.2 mi total 0.5 mi
	Continue onto S Edwin C Moses Blvd     About 1 min	go 0.4 mi total 0.9 mi
ኅ	Turn left onto the Interstate 75 N ramp to Toledo     About 54 secs	go 0.2 mi total 1.1 mi
75	5. Merge onto I-75 N About 3 mins	go 2.1 mi total 3.2 mi
7	6. Take exit 54A for Ohio 48/Main St	go 0.4 mi total 3.6 mi
Ļ	7. Turn right onto N Main St About 56 secs	go 0.3 mi total 3.9 mi
Ļ	Turn right onto W Riverview Ave     About 59 secs	go 0.3 mi total 4.2 mi
7	Slight right onto Forest Ave     About 50 secs	go 0.2 mi total 4.4 mi
។	Turn left onto W Grand Ave     Destination will be on the right     About 49 secs	go 0.1 mi total 4.6 mi
	Grandview Medical Center 405 W Grand Ave, Dayton, OH 45405	

	6.2	CONTINGENCI	ES		
6.2.1 Response Plans					
Medical - General  Provide first aid, if trained; assess and determine need for further medical assistance.  Transport or arrange for transport after appropriate.		First Aid Kit:  Yes No  Blood Borne Pathogens Kit:  Yes No	Type Standard 20-man and infection control kit	Location In Vehicle	Special First-Aid Procedures: Cyanides on-site Yes No If yes, contact LMF. Do they have antidote kit? Yes No
LMF = Local Medical Facility		Eyewash required  Yes No  Shower required	Type 4 x 4 oz bottles	Location In Vehicle	HF on-site  ☐ Yes ☒ No  If yes, need neutralizing ointment for first- aid kit. Contact LMF.
		Yes No	туре	Location	
Plan for Response to Spill/Release		Plan for Response to Fire/Explosion		Fire Extinguishers	
In the event of a spill or release, ensure safety, assess situation, and perform containment and control measures, as appropriate.  Description of Spill Response Gear	<ul> <li>a. Cleanup per SDSs if small; or sound alarm, call for assistance, notify Emergency Coordinator</li> <li>b. Evacuate to predetermined safe place</li> <li>c. Account for personnel</li> <li>d. Determine if team can respond safely</li> <li>e. Mobilize per Site Spill Response Plan</li> </ul>	In the event of a fire or explosion, ensure personal safety, assess situation, and perform containment and control measures, as appropriate:  Description (Other Fire Re	b. Evacuate predeterm place c. Account for the distribution of materia conditions	nce, notify by Coordinator to ined safe or personnel etinguisher and trained or inform y responders ls and	Type/Location  ABC/Vehicle / / / / / / / Location
Plan to Respond to Seci	urity Problems				
Avoid confrontation, cal	1911, and alert OSC				

#### 7. DECONTAMINATION PLAN

7.1 GENERAL DECONTAMINATION PLAN				
Parsannal Decentamination				
Personnel Decontamination  Consistent with the levels of protection required, step-by-step procedures for personnel decontamination for each level of protection are attached.				
Levels of Protection Requi	red for Decontamination Pers	onnel		
The levels of protection required for personnel assisting wi				
<u> </u>	¬	M		
Level B	Level C	Level D		
Modifications include:				
Disposition of D	econtamination Wastes			
Provide a description of waste disposition including identi		d final disposal site, if		
applicable				
Bag PPE waste and transport offsite (from residences) fo	ur disposal			
Dag 11 2 waste and transport enous (from residences) to	r diopoddi.			
Equipmen	t Decontamination			
A procedure for decontamination steps required for non-sa	ampling equipment and heavy machi	nery follows:		
No decentemination is entisinated				
No decontamination is anticipated.				
Sampling Equipment will be decontaminated in accordance	oment Decontamination			
Sampling equipment will be decontaminated in accordance	s with the following procedure.			
Remove dust from drill bit and other equipment with mois	t paper towel or rag. Bag waste for	removal from site.		
Wet clean HEPA vacuum at completion of work.				

7.2 LEVEL D DECONTAMINATION PLAN				
Check indicated functions or add steps, as necessary:				
Function	Description of Process, Solution, and Container			
Segregated equipment drop				
☐Boot cover and glove wash				
☐Boot cover and glove rinse				
☐Tape removal - outer glove and boot				
☐Boot cover removal				
⊠Outer glove removal	Remove leather gloves, if applicable.			
	HOTLINE			
☐Suit/safety boot wash				
☐Suit/boot/glove rinse				
Safety boot removal				
Suit removal				
☐Inner glove wash				
☐Inner glove rinse				
⊠Inner glove removal	Dispose in trash bag			
☐Inner clothing removal				
CONTAMINATION	REDUCTION ZONE (CRZ)/SAFE ZONE BOUNDARY			
⊠Field wash	Wash hands & face prior to eating or drinking			
Redress				
Disposal Plan, End of Day: Dispose of used PPE in trash bag and place	e in solid waste.			
Disposal Plan, End of Week: See Above				
Disposal Plan, End of Project: See Above				

7.3 LEVEL C DECONTAMINATION PLAN
Check indicated functions or add steps, as necessary:
Function Description of Process, Solution, and Container
Segregated equipment drop
Boot cover and glove wash
Boot cover and glove rinse
Tape removal - outer glove and boot
Boot cover removal
Outer glove removal
HOTLINE
Suit/safety boot wash
Suit/boot/glove rinse
Safety boot removal
Suit removal
☐Inner glove wash
☐Inner glove rinse
Facepiece removal
☐Inner glove removal
Inner clothing removal
CONTAMINATION REDUCTION ZONE (CRZ)/SAFE ZONE BOUNDARY
Field wash
Redress
Disposal Plan, End of Day:
Disposal Plan, End of Week:
Disposal Plan, End of Project:

7.4 LEVEL B ( ) or Level A ( ) DECONTAMINATION PLAN	
Check indicated functions or add steps, as necessary:	
Function Description of Process, Solution, and Container	
Segregated equipment drop	
Boot cover and glove wash	
Boot cover and glove rinse	
Tape removal - outer glove and boot	
Boot cover removal	
Outer glove removal	
HOTLINE	
Suit/safety boot wash	
Suit/SCBA/boot/glove rinse	
Safety boot removal	
Remove SCBA backpack without disconnecting	
Splash suit removal	
☐Inner glove wash	
☐Inner glove rinse	
SCBA disconnect and facepiece removal	
☐Inner glove removal	
☐Inner clothing removal	
CONTAMINATION REDUCTION ZONE (CRZ)/SAFE ZONE BOUNDARY	
Field wash	
Field wash  Redress	
Redress	
Redress  Disposal Plan, End of Day:	
Redress  Disposal Plan, End of Day:	
Redress  Disposal Plan, End of Day:	
Redress  Disposal Plan, End of Day:	
Redress  Disposal Plan, End of Day:	
Redress  Disposal Plan, End of Day:	
Redress Disposal Plan, End of Day:  Disposal Plan, End of Week:	
Redress Disposal Plan, End of Day:  Disposal Plan, End of Week:	
Redress Disposal Plan, End of Day:  Disposal Plan, End of Week:	
Redress Disposal Plan, End of Day:  Disposal Plan, End of Week:	

# 8. TRAINING AND BRIEFING TOPICS/SIGN OFF SHEET

8.1 TRAINING AND BRIEFING TOPICS					
The following items will be covered at the site-specific training meeting, daily or periodically.					
Site characterization and analysis, Sec. 3.0, 29 CFR 1910.120 I	Level A				
Physical hazards	Level B				
Chemical hazards	Level C				
Animal bites, stings, and poisonous plants	Level D				
Etiologic (infectious) agents	Monitoring, 29 CFR 1910.120 (h)				
Site control, 29 CFR 1910.120 d	Decontamination, 29 CFR 1910.120 (k)				
Engineering controls and work practices, 29 CFR 1910.120 (g)	Emergency response, 29 CFR 1910.120 (I)				
Heavy machinery (Drilling equipment)	Elements of an emergency response, 29 CFR 1910.120 (I)				
Forklift	Procedures for handling site emergency incidents, 29 CFR 1910.120 (I)				
Backhoe	Off-site emergency response, 29 CFR 1910.120 (I)				
Equipment	Handling drums and containers, 29 CFR 1910.120 (j)				
Tools	Opening drums and containers				
Ladder, 29 CFR 1910.27 (d)/29 CFR 1926	Electrical material handling equipment				
Overhead and underground utilities	Radioactive waste				
Scaffolds	Shock-sensitive waste				
Structural integrity	Laboratory waste packs				
Unguarded openings - wall, floor, ceilings	Sampling drums and containers				
Pressurized air cylinders	Shipping and transport, 49 CFR 172.101, IATA				
Personal protective equipment, 29 CFR 1910.120 (g); 29 CFR 1910.134	Tank and vault procedures				
Respiratory protection, 29 CFR 1910.120 (g); ANSI Z88.2	Illumination, 29 CFR 1910.120 (m)				
Working over water FLD-19	Sanitation, 29 CFR 1910.120 (n)				
Boating safety FLD-18	Proper lifting techniques				
Heat Stress / Cold Stress					

## Site Name: South Dayton Dump Landfill WO#: 20405.012.001.2219.00 1975 Dryden Road, Moraine, Ohio Address: I understand, agree to, and will conform with the information set forth in this Health and Safety Plan (and attachments) and discussed in the personnel health and safety briefing(s). Name **Signature Date**

8.2 HEALTH AND SAFETY PLAN APPROVAL/SIGNOFF FORM

## ATTACHMENT A CHEMICAL CONTAMINANTS DATA SHEETS

Insert sheets on following page.

1,1-Dichloroethan	<b>CAS</b> 75-34-3			
CHCI₂CH <sub>3</sub>			RTECS <u>KI0175000</u>	
Synonyms & Trade Names Asymmetrical dichloroethane; Ethylidene chloride; 1,1-Ethylidene dichloride  DOT ID & Guide 2362 130				
Exposure NIOSH REL: TWA 100 ppm (400 mg/m <sup>3</sup> ) See Appendix C (Chloroethanes)				
Limits	OSHA PEL: TWA 100 ppm (400 mg/m³)			
<b>IDLH</b> 3000 ppm See: <u>75343</u>				
Physical Description Colorless, oily liquid with a chloroform-like odor.				
MW: 99.0	BP: 135°F FRZ: -143°F Sol: 0.6%			

MW: 99.0	BP: 135°F	FRZ: -143°F	Sol: 0.6%
VP: 182 mmHg	IP: 11.06 eV		Sp.Gr: 1.18
Fl.P: 2°F	UEL: 11.4%	LEL: 5.4%	

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

#### Incompatibilities & Reactivities

Strong oxidizers, strong caustics

#### **Measurement Methods** NIOSH 1003; OSHA 7

See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection)

Skin: Prevent skin contact

Eyes: Prevent eye contact

Wash skin: When contaminated

First Aid (See procedures)

Eye: Irrigate immediately

Skin: Soap flush promptly

Breathing: Respiratory support

Wash skin: When contaminated Breathing: Respiratory support Swallow: Medical attention immediately Change: No recommendation

#### Important additional information about respirator selection

#### Respirator Recommendations NIOSH/OSHA

Up to 1000 ppm:

(APF = 10) Any supplied-air respirator

Up to 2500 ppm:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode

Up to 3000 ppm:

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

#### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms Irritation skin; central nervous system depression; liver, kidney, lung damage

Target Organs Skin, liver, kidneys, lungs, central nervous system

Benzene	<b>CAS</b> 71-43-2
C <sub>6</sub> H <sub>6</sub>	RTECS <u>CY1400000</u>
Synonyms & Trade Names	DOT ID & Guide
Benzol, Phenyl hydride	1114 <u>130</u>
- DUCCULDEL O TWO O.A. OT A. S.	**

 Exposure
 NIOSH REL: Ca TWA 0.1 ppm ST 1 ppm See Appendix A

 Limits
 OSHA PEL: [1910.1028] TWA 1 ppm ST 5 ppm See Appendix F

**IDLH** Ca [500 ppm] See:  $\frac{71432}{}$  **Conversion** 1 ppm = 3.19 mg/m<sup>3</sup>

#### **Physical Description**

Colorless to light-vellow liquid with an aromatic odor, [Note: A solid below 42°F,]

Colonoco to light yollow liquid with all distribute odor. [Note: A colla bolow 12 1.]			
MW: 78.1	BP: 176°F	FRZ: 42°F	Sol: 0.07%
VP: 75 mmHg	IP: 9.24 eV		Sp.Gr: 0.88
Fl.P: 12°F	UEL: 7.8%	LEL: 1.2%	

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

#### Incompatibilities & Reactivities

Strong oxidizers, many fluorides & perchlorates, nitric acid

#### **Measurement Methods**

NIOSH 1500, 1501, 3700, 3800; OSHA 12, 1005

See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection)

Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet (flammable)
Change: No recommendation
Provide: Eyewash, Quick drench

First Aid (See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

Important additional information about respirator selection

#### Respirator Recommendations (See Appendix E) NIOSH

#### At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressuredemand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** Irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude (weakness, exhaustion); dermatitis; bone marrow depression; [potential occupational carcinogen]

Target Organs Eyes, skin, respiratory system, blood, central nervous system, bone marrow

Cancer Site [leukemia]

Chlorobenzene	CAS 108-90-7
C <sub>6</sub> H <sub>5</sub> CI	RTECS <u>CZ0175000</u>
Synonyms & Trade Names Benzene chloride, Chlorobenzol, MCB, Monochlorobenzene, Phenyl chloride	<b>DOT ID &amp; Guide</b> 1134 <u>130</u>
- NICOLL DEL. G. A. J. D.	

**Exposure** NIOSH REL: See Appendix D

Limits OSHA PEL: TWA 75 ppm (350 mg/m<sup>3</sup>)

**Physical Description** 

Colorless liquid with an almond-like odor.

Colonioso ilquia with air			
MW: 112.6	BP: 270°F	FRZ: -50°F	Sol: 0.05%
VP: 9 mmHg	IP: 9.07 eV		Sp.Gr: 1.11
FI.P: 82°F	UEL: 9.6%	LEL: 1.3%	

Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.

#### Incompatibilities & Reactivities

Strong oxidizers

**Measurement Methods**NIOSH <u>1003</u>; OSHA <u>7</u>
See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection)

Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contaminated Remove: When wet (flammable) Change: No recommendation First Aid (See procedures)

Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support

Swallow: Medical attention immediately

#### Important additional information about respirator selection

#### **Respirator Recommendations OSHA**

#### Up to 1000 ppm:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode<sup>£</sup>

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)<sup>£</sup>

(APF = 50) Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

#### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressuredemand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

#### Exposure Routes inhalation, ingestion, skin and/or eye contact

**Symptoms** Irritation eyes, skin, nose; drowsiness, incoordination; central nervous system depression; in animals: liver, lung, kidney injury

Target Organs Eyes, skin, respiratory system, central nervous system, liver

Chloroform	<b>CAS</b> 67-66-3
CHCI <sub>3</sub>	RTECS <u>FS9100000</u>
Synonyms & Trade Names	DOT ID & Guide
Methane trichloride, Trichloromethane	1888 <u>151</u>

Exposure
NIOSH REL: Ca ST 2 ppm (9.78 mg/m³) [60-minute] See Appendix A

OSHA PEL†: C 50 ppm (240 mg/m³)

#### **Physical Description**

Colorless liquid with a pleasant odor.

Colonoco Inquia With a picacant cach.			
MW: 119.4	BP: 143°F	FRZ: -82°F	Sol(77°F): 0.5%
VP: 160 mmHg	IP: 11.42 eV		Sp.Gr: 1.48
FI.P: NA	UEL: NA	LEL: NA	

#### Noncombustible Liquid

#### **Incompatibilities & Reactivities**

Strong caustics; chemically-active metals such as aluminum or magnesium powder, sodium & potassium; strong oxidizers [Note: When heated to decomposition, forms phosgene gas.]

#### **Measurement Methods**

**NIOSH 1003** 

See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: No recommendation
Provide: Eyewash, Quick drench

First Aid (See procedures)
Eye: Irrigate immediately
Skin: Soap wash promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Important additional information about respirator selection

#### Respirator Recommendations NIOSH

#### At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** Irritation eyes, skin; dizziness, mental dullness, nausea, confusion; headache, lassitude (weakness, exhaustion); anesthesia; enlarged liver; [potential occupational carcinogen]

Target Organs Liver, kidneys, heart, eyes, skin, central nervous system

Cancer Site [in animals: liver & kidney cancer]

1,2-Dichloroethylene	<b>CAS</b> 540-59-0
CICH=CHCI	RTECS <u>KV9360000</u>
Synonyms & Trade Names Acetylene dichloride, cis-Acetylene dichloride, trans-Acetylene dichloride, sym-Dichloroethylene	<b>DOT ID &amp; Guide</b> 1150 <u>130</u> P

NIOSH REL: TWA 200 ppm (790 mg/m<sup>3</sup>) **Exposure** Limits OSHA PEL: TWA 200 ppm (790 mg/m<sup>3</sup>)

IDLH 1000 ppm See: 540590 Conversion 1 ppm = 3.97 mg/m<sup>3</sup>

#### **Physical Description**

Colorless liquid (usually a mixture of the cis & trans isomers) with a slightly acrid, chloroform-like odor.

MW: 97.0	BP: 118-140°F	FRZ: -57 to -115°F	Sol: 0.4%
VP: 180-265 mmHg	IP: 9.65 eV		Sp.Gr(77°F): 1.27
FI.P: 36-39°F	UEL: 12.8%	LEL: 5.6%	

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

#### Incompatibilities & Reactivities

Strong oxidizers, strong alkalis, potassium hydroxide, copper [Note: Usually contains inhibitors to prevent polymerization.]

#### **Measurement Methods** NIOSH <u>1003</u>; OSHA <u>7</u>

See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection)

Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contaminated Remove: When wet (flammable)

Change: No recommendation

First Aid (See procedures) Eye: Irrigate immediately

Skin: Soap wash promptly Breathing: Respiratory support

Swallow: Medical attention immediately

#### Important additional information about respirator selection

#### Respirator Recommendations NIOSH/OSHA

#### Up to 2000 ppm:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode<sup>£</sup>

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)<sup>£</sup>

(APF = 50) Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

#### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressuredemand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms Irritation eyes, respiratory system; central nervous system depression

Target Organs Eyes, respiratory system, central nervous system

Ethyl benzene	CAS 100-41-4
CH <sub>3</sub> CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>	RTECS <u>DA0700000</u>
Synonyms & Trade Names Ethylbenzol, Phenylethane	<b>DOT ID &amp; Guide</b> 1175 <u>130</u>

Exposure NIOSH REL: TWA 100 ppm (435 mg/m³) ST 125 ppm (545 mg/m³)

Limits OSHA PEL†: TWA 100 ppm (435 mg/m³)

**Physical Description** 

Colorless liquid with an aromatic odor.

Coloness liquid with an alomatic odor.			
MW: 106.2	BP: 277°F	FRZ: -139°F	Sol: 0.01%
VP: 7 mmHg	IP: 8.76 eV		Sp.Gr: 0.87
FI.P: 55°F	UEL: 6.7%	LEL: 0.8%	

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

#### Incompatibilities & Reactivities

Strong oxidizers

**Measurement Methods** NIOSH <u>1501</u>; OSHA <u>7</u>, <u>1002</u> See: NMAM or OSHA Methods

Personal Protection & Sanitation (See protection)
Skin: Prevent skin contact
Eyes: Prevent eye contact

Wash skin: When contaminated Remove: When wet (flammable) Change: No recommendation First Aid (See procedures)

Eye: Irrigate immediately Skin: Water flush promptly Breathing: Respiratory support

Swallow: Medical attention immediately

#### Important additional information about respirator selection

#### **Respirator Recommendations NIOSH/OSHA**

#### Up to 800 ppm:

(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)\*

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)\*

(APF = 10) Any supplied-air respirator\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

#### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressuredemand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms Irritation eyes, skin, mucous membrane; headache; dermatitis; narcosis, coma

Target Organs Eyes, skin, respiratory system, central nervous system

o-Xylene	<b>CAS</b> 95-47-6
C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	RTECS <u>ZE2450000</u>
- <b>/</b> · · · · <b>/</b> · · · · · · · · · · · · · · · · · · ·	DOT ID & Guide
1,2-Dimethylbenzene; ortho-Xylene; o-Xylol	1307 <u>130</u>

 Exposure
 NIOSH REL: TWA 100 ppm (435 mg/m³) ST 150 ppm (655 mg/m³)

 Limits
 OSHA PEL†: TWA 100 ppm (435 mg/m³)

#### **Physical Description**

Colorless liquid with an aromatic odor.

Coloness liquid with an alomatic odor.			
MW: 106.2	BP: 292°F	FRZ: -13°F	Sol: 0.02%
VP: 7 mmHg	IP: 8.56 eV		Sp.Gr: 0.88
FI.P: 90°F	UEL: 6.7%	LEL: 0.9%	

Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.

#### Incompatibilities & Reactivities

Strong oxidizers, strong acids

#### **Measurement Methods**

NIOSH <u>1501</u>, <u>3800</u>; OSHA <u>1002</u> See: <u>NMAM</u> or <u>OSHA Methods</u>

Personal Protection & Sanitation (See protection)

Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contaminated Remove: When wet (flammable)

Change: No recommendation

First Aid (See procedures)

Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support

Swallow: Medical attention immediately

#### Important additional information about respirator selection

#### Respirator Recommendations NIOSH/OSHA

#### Up to 900 ppm:

(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)\*

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)\*

(APF = 10) Any supplied-air respirator\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

#### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressuredemand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis

Target Organs Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys

Trichloroethylene	<b>CAS</b> 79-01-6
CICH=CCI <sub>2</sub>	RTECS <u>KX4550000</u>
Synonyms & Trade Names	DOT ID & Guide
Ethylene trichloride, TCE, Trichloroethene, Trilene	1710 <u>160</u>

**IDLH** Ca [1000 ppm] See: 79016 **Conversion** 1 ppm = 5.37 mg/m<sup>3</sup>

#### **Physical Description**

Colorless liquid (unless dyed blue) with a chloroform-like odor.

MW: 131.4	BP: 189°F	FRZ: -99°F	Sol(77°F): 0.1%
VP: 58 mmHg	IP: 9.45 eV		Sp.Gr: 1.46
Fl.P: ?	UEL(77°F): 10.5%	LEL(77°F): 8%	

Combustible Liquid, but burns with difficulty.

#### Incompatibilities & Reactivities

Strong caustics & alkalis; chemically-active metals (such as barium, lithium, sodium, magnesium, titanium & beryllium)

#### **Measurement Methods**

NIOSH <u>1022</u>, <u>3800</u>; OSHA <u>1001</u> See: <u>NMAM</u> or <u>OSHA Methods</u>

Personal Protection & Sanitation (See protection)

Skin: Prevent skin contact

Eyes: Prevent eye contact

Wash skin: When contaminated

Remove: When wet or contaminated

First Aid (See procedures)

Eye: Irrigate immediately

Skin: Soap wash promptly

Breathing: Respiratory support

Swallow: Medical attention immediately

Change: No recommendation Provide: Eyewash, Quick drench

#### Important additional information about respirator selection

#### Respirator Recommendations NIOSH

#### At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressuredemand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** Irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen]

Target Organs Eyes, skin, respiratory system, heart, liver, kidneys, central nervous system

Cancer Site [in animals: liver & kidney cancer]

Vinyl chloride	<b>CAS</b> 75-01-4
CH <sub>2</sub> =CHCI	RTECS <u>KU9625000</u>
Synonyms & Trade Names Chloroethene, Chloroethylene, Ethylene monochloride, Monochloroethene, Monochloroethylene, VC, Vinyl chloride monomer (VCM)	DOT ID & Guide 1086 116P (inhibited)

Exposure NIOSH REL: Ca See Appendix A

Limits OSHA PEL: [1910.1017] TWA 1 ppm C 5 ppm [15-minute]

IDLH Ca [N.D.] See: IDLH INDEX Conversion 1 ppm = 2.56 mg/m<sup>3</sup>

#### **Physical Description**

Colorless gas or liquid (below 7°F) with a pleasant odor at high concentrations. [Note: Shipped as a liquefied compressed gas.]

MW: 62.5	BP: 7°F	FRZ: -256°F	Sol(77°F): 0.1%
VP: 3.3 atm	IP: 9.99 eV	RGasD: 2.21	
FI.P: NA (Gas)	UEL: 33.0%	LEL: 3.6%	

Flammable Gas

#### Incompatibilities & Reactivities

Copper, oxidizers, aluminum, peroxides, iron, steel [Note: Polymerizes in air, sunlight, or heat unless stabilized by inhibitors such as phenol. Attacks iron & steel in presence of moisture.]

#### **Measurement Methods**

NIOSH <u>1007</u>; OSHA <u>4</u>, <u>75</u> See: <u>NMAM</u> or <u>OSHA Methods</u>

Personal Protection & Sanitation (See protection) First Aid (See procedures)

Skin: Frostbite Eye: Frostbite Skin: Frostbite

Wash skin: No recommendation
Remove: When wet (flammable)
Change: No recommendation

Change: No recommendation Provide: Frostbite wash

#### Important additional information about respirator selection

#### Respirator Recommendations (See Appendix E) NIOSH

#### At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressuredemand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus **Escape**:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern/Any appropriate escape-type, self-contained breathing apparatus

#### Exposure Routes inhalation, skin, and/or eye contact (liquid)

**Symptoms** Lassitude (weakness, exhaustion); abdominal pain, gastrointestinal bleeding; enlarged liver; pallor or cyanosis of extremities; liquid: frostbite; [potential occupational carcinogen]

Target Organs Liver, central nervous system, blood, respiratory system, lymphatic system

Cancer Site [liver cancer]

## ATTACHMENT B SAFETY DATA SHEETS

(ATTACH SDS)

Insert documents on following page.

#### **ATTACHMENT C**

#### SAFETY PROCEDURES/FIELD OPERATING PROCEDURES (FLD OPS)

Insert documents on following page.

In lieuof attaching individual copies of FLDs, the site safety officer or his designee may elect to maintain an electronic copy of the WESTON Corporate Environmental Compliance, Health, and Safety Program Manual (including all FLDs) on site in an electronic format. The most recent version of the CEHS Program Manual and supporting documents are located at:

http://portal/services/EHS/SitePages/CEHSProgramElements.aspx

## ATTACHMENT D HAZARD COMMUNICATION PROGRAM

#### SITE-SPECIFIC HAZARD COMMUNICATION PROGRAM

#### Location-Specific Hazard Communication Program/Checklist

To ensure an understanding of and compliance with the Hazard Communication Standard, WESTON will use this checklist/document (or similar document) in conjunction with the WESTON Written Hazard Communication Program as a means of meeting site- or location-specific requirements.

While responsibility for activities within this document reference the WESTON Safety Officer (SO), it is the responsibility of all personnel to effect compliance. Responsibilities under various conditions can be found within the WESTON Written Hazard Communication Program.

To ensure that information about the dangers of all hazardous chemicals used by WESTON is known by all affected employees, the following Hazard Communication Program has been established. All affected personnel will participate in the Hazard Communication Program. This written program, as well as WESTON's Corporate Hazard Communication Program, will be available for review by any employee, employee representative, representative of OSHA, NIOSH, or any affected employer/employee on a multi-employer site.

Site or other location name/addre	ess: South Dayton Dump Landfill					
Site/Project/Location Manager:	John Sherrard					
Site/Location Safety Officer:	Dave Robinson					
List of chemicals compiled, forma	at: 🛛 HASP 🔲 Other:					
Location of MSDS files:	HASP					
Training conducted by: Name:		Date:				
Indicate format of training docum	entation: ⊠ Field Log: ☐ Other:					
Client briefing conducted regarding hazard communication:						
☐ If multi-employer site (client, subcontractor, agency, etc.), indicate name of affected companies:						
Other employer(s) notified of chemicals, labeling, and MSDS information:						
☐ Has WESTON been notified of other employer's or client's hazard communication program(s), as necessary? ☐ Yes ☐ No						

#### List of Hazardous Chemicals

A list of known hazardous chemicals used by WESTON personnel must be prepared and attached to this document or placed in a centrally identified location with the MSDSs. Further information on each chemical may be obtained by reviewing the appropriate MSDS. The list will be arranged to enable cross-reference with the MSDS file and the label on the container. The SO or Location Manager is responsible for ensuring the chemical listing remains up-to-date.

#### **Container Labeling**

The WESTON SO will verify that all containers received from the chemical manufacturer, importer, or distributor for use on-site are clearly labeled.

The SO is responsible for ensuring that labels are placed where required and for comparing MSDSs and other information with label information to ensure correctness.

#### Material Safety Data Sheets (MSDSs)

The SO is responsible for establishing and monitoring WESTON's MSDS program for the location. The SO will ensure that procedures are developed to obtain the necessary MSDSs and will review incoming MSDSs for new or significant health and safety information. He/she will see that any new information is passed on to the affected employees. If an MSDS is not received at the time of initial shipment, the SO will call the manufacturer and have an MSDS delivered for that product in accordance with the requirements of WESTON's Written Hazard Communication Program.

A log for, and copies of, MSDSs for all hazardous chemicals in use will be kept in the MSDS folder at a location known to all site workers. MSDSs will be readily available to all employees during each work shift. If an MSDS is not available, immediately contact the WESTON SO or the designated alternate. When a revised MSDS is received, the SO will immediately replace the old MSDS.

#### **Employee Training and Information**

The SO is responsible for the WESTON site-specific personnel training program. The SO will ensure that all program elements specified below are supplied to all affected employees.

At the time of initial assignment for employees to the work site, or whenever a new hazard is introduced into the work area, employees will attend a health and safety meeting or briefing that includes the information indicated below.

- Hazardous chemicals present at the work site.
- Physical and health risks of the hazardous chemicals.
- The signs and symptoms of overexposure.
- Procedures to follow if employees are overexposed to hazardous chemicals.
- Location of the MSDS file and Written Hazard Communication Program.
- How to determine the presence or release of hazardous chemicals in the employee's work area.
- How to read labels and review MSDSs to obtain hazard information.
- Steps WESTON has taken to reduce or prevent exposure to hazardous chemicals.
- How to reduce or prevent exposure to hazardous chemicals through the use of controls procedures, work practices, and personal protective equipment.
- Hazardous, nonroutine tasks to be performed (if any).
- Chemicals within unlabeled piping (if any).

#### Hazardous Nonroutine Tasks

When employees are required to perform hazardous nonroutine tasks, the affected employee(s) will be given information by the SO about the hazardous chemicals he or she may use during such activity. This information will include specific chemical hazards, protective and safety measures the employee can use, and steps WESTON is using to reduce the hazards. These steps include, but are not limited to, ventilation, respirators, presence of another employee, and emergency procedures.

#### Chemicals in Unlabeled Pipes

Work activities may be performed by employees in areas where chemicals are transferred through unlabeled pipes. Prior to starting work in these areas, the employee will contact the SO, at which time information as to the chemical(s) in the pipes, potential hazards of the chemicals or the process involved, and the safety precautions that should be taken will be determined and presented.

#### Multi-Employer Work Sites

It is the responsibility of the SO to provide other employers with information about hazardous chemicals imported by WESTON to which their employees may be exposed, along with suggested safety precautions. It is also the responsibility of the SO and the Site Manager to obtain information about hazardous chemicals used by other employers to which WESTON employees may be exposed. WESTON's chemical listing will be made available to other employers, as requested. MSDSs will be available for viewing, as necessary.

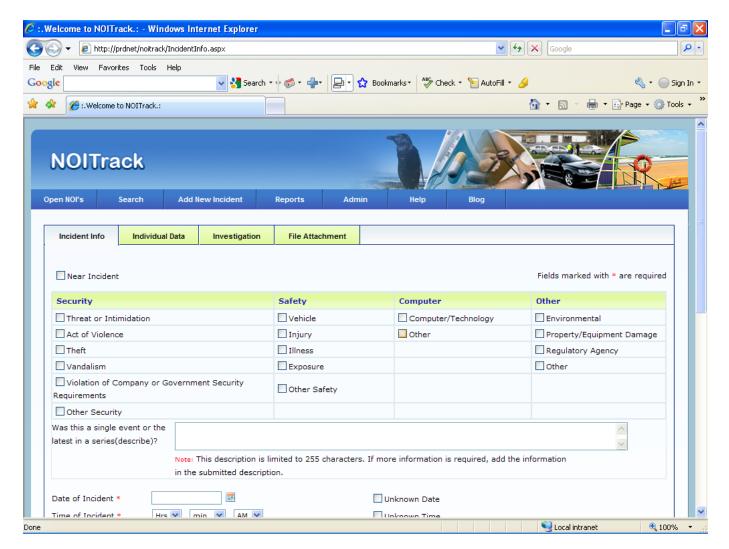
The location, format, and/or procedures for accessing MSDS information must be relayed to affected employees.

## ATTACHMENT E AIR SAMPLING DATA SHEETS

SITE AIR MONITORING PROGRAM								
			Fie	eld Data She	ets			
Location:				GM: Shield Probe/ Aerosol Thin Window				
% LEL	% O <sub>2</sub>	PID (units)	FID (units)	Monitor (mg/m³)	mR/hr	cpm	Nal (uR/hr)	ZnS (cpm)
	Monit	tox (ppm)		Detector Tube(s)				
Sound Lev	els (dBA)	Illumination	рН	Other	Other	Other	Other	Other
Location:								
Location.				Aerosol Monitor	GM: Shield Probe/ Thin Window		Nal	ZnS
% LEL	% O <sub>2</sub>	PID (units)	FID (units)	(mg/m³)	mR/hr	cpm	(uR/hr)	(cpm)
	Monit	tox (ppm)			D	 etector Tube	(s)	
Sound Lev	els (dBA)	Illumination	рН	Other	Other	Other	Other	Other
		<u> </u>						

AIR MONITORING/SAMPLING DATA LOG								
Client:			W.O. No.:		Sample No.:			
Address:			Sampled By: Date:					
	Emplo	-	nd Locati		rmation			
Employee Name:		Em	ployee No	).:		Job Title:		
Respirator ☐ APR ☐ PAPR ☐ SAR ☐ SCBA	☐ ½ Mask ☐ Full Fa	ace 🗌	Hood Hood	Manufa			Cartridge	Туре:
PPE:  Hard Ha	at  HPD Glove	s 🗌	Safety Sho	es 🔲 (	Coveralls	Other:		
		Sa	ampling [	Data				
	Personal	Media:				Pump Ty	pe/Serial No	.:
☐ TWA ☐ STEL	☐ Area ☐ Source					,		
☐ Full Shift ☐ Partial S	Shift Grab							
Calibrator/Serial No.:		Pre-Cali	bration:			Post-Cali	bration:	
/		1. 2. 3.				1. 2. 3.		
Start Time:	Restart Time:	avg-pre Rest	art Time: Avg. Flow rate:		% Cha	nge:		
et a —	and a second							
1 <sup>st</sup> Stop Time:	2 <sup>nd</sup> Stop Time:	3.ª S	top Time: Total Time:		me:	Volum	e:	
Multiple Samples for this ☐ Yes ☐ No	TWA: Multip		nical Exposures: Exposure Time:  No Normal Worst Case		est Casa			
			oling Con	ditions		Nonnai		si Case
Weather Conditions:	T					0.11		
Engineering Controls:	Temp: R	H:	В.	.P.:	(	Other:		
		0						
Substance	Result S	Substanc	ances Ev	aluated/ Resu	-	Substar	ıce	Result
Gustano	- Noone	ubotuno		Hood		- Cubotai		Hoodii
Observations and Comments								
QA by:							Date	£

## ATTACHMENT F INCIDENT REPORTING



Please go to NOITrack using the following link to complete incident reporting. If you are in the field and do not have access to NOITrack, please contact someone in your office to do the reporting for you.

http://prdnet/noitrack/IncidentInfo.aspx

Questions can be directed to Susan Hipp-Ludwick at 610.701.3046.



Insert documents on following page.



### **ENVIRONMENTAL HEALTH AND SAFETY INSPECTION CHECKLIST**

Project Name:		
Inspector:		
Submit to:		
	Date:	

#### THE WESTON SITE APPEARANCE

YES	NO		COMMENT
		Is the site secured to prevent inadvertent, unnecessary, or unauthorized access? Are gates closed and locked at any time that the access point is not occupied or visible to site workers?	
		Are access points posted with signs to indicate client and end-user client name, WESTON's name and logo, names of other contractors and sub-contractors, project name and location, and appropriate safety messages?	
		Are required postings in place (e.g., Labor Poster, Emergency Phone Numbers, Site Map, etc.)?	
		Are site trailers tied down per local code and provided with stairs that have a landing platform with guard and stair railings?	
		Is a Site Safety file system established in the office to maintain records required by applicable safety regulations	
		Is the Health and Safety Plan (HASP) or Accident Prevention Plan (APP) amended as scope of work changes, hazards are discovered or eliminated or if risk change?	
		Is the Site Safety Plan and the Safety Officers Field Manual on site?	
		Is new employee indoctrination provided?	
		Have site Rules been provided, discussed and signed off on by all employees	
		Incident Reporting procedure explained to all?	
		Is site management trained in the WESTON (and client as applicable) Incident Reporting system?	
		Are NOI and Supplemental Report forms and OSHA 300 Log available on site?	
		Is Site Management aware of the Case Management and Incident Investigation Procedures?	
		Is there a list of preferred provider medical facilities available?	
		Has the "Inspection By A Regulatory Agency" procedure been reviewed by all site management?	
		Will Competent Persons be required because of activities to be performed, equipment to be used or hazards to be encountered?	
		POLICIES	
YES	NO		COMMENT
		Each individual employee is aware that he or she responsible for complying with applicable safety requirements, wearing prescribed safety equipment and preventing avoidable accidents.	
		Do employees understand that they will wear clothing suitable for existing weather and work conditions and the minimum work uniform will include long pants, sleeved work shirts, protective footwear, hard hat, and safety glasses unless otherwise specified via the HASP.	
		Are employees provided safety and health training to enable them to perform their work safely? Is all training documented to indicate the date of the session, topics covered, and names of participants?	
		Safety meetings are conducted daily. The purpose of the meetings are to review past activities, review pertinent tailgate safety topics and establish safe working procedures for anticipated hazards encountered during the day.	
		Training has been provided to all personnel regarding handling of emergency situations that may arise from the activity or use of equipment on the project.	
		Employees/contractors are informed and understand that they may not be under the influence of alcohol, narcotics, intoxicants, or similar mind-altering substances at any time. Employees found under the influence of or consuming such substances will be immediately removed from the job site.	
		Site workers and operators of any equipment or vehicles are able to read and understand the signs, signals, and operating instructions of their use.	
		Have contractors performing work provided copies of relevant documentation (such as medical fit-for-duty, training certificates, fit-tests, etc.) prior to initiation of the project?	

#### SANITATION 29 CFR 1926 Subparts C, D. EM 385-1-1, Section 2

YES	NO		COMMENT	
		Is an adequate supply of drinking water provided? Is potable/drinking water labeled as such? Are there sufficient drinking cups provided?		
		Are there a sufficient number of toilets?		
		Are washing facilities readily available and appropriate for the cleaning needs?		
		Are washing facilities kept sanitary with adequate cleansing and drying materials?		
		Waste is secured so as not to attract rodents, insects, or other vermin?		
		Is an effective housekeeping program established and implemented?		
ACCIDENT PREVENTION SIGNS, TAGS, LABELS, SIGNALS, AND PIPING SYSTEM IDENTIFICATION 29 CFR 1926 Subpart G. EM 385-1-1, Section 8				
YES	NO		COMMENT	
		Are signs, tags, and labels provided to give adequate warning and caution of hazards and instruction/directions to workers and the public?		
		Are all employees informed as to the meaning of the various signs, tags, and labels used in the workplace and what special precautions are required?		
		Are construction areas posted with legible traffic signs at points of hazard?		
		Are signs required to be seen at night lighted or reflectorized?		
		Tags contain a signal word ("danger" or "caution") and a major message to indicate the specific hazardous condition or the instruction to be communicated to the employee. Tags follow requirements as outlined in 29 CFR 1926.200.		
	1	MEDICAL SERVICES AND FIRST AID 29 CFR 1926 Subparts C, D. EM 385-1-1, Section 3		
YES	NO	Is a local medical emergency facility (LMEF) identified in the HASP or APP?	COMMENT	
$\sqcup$	$\vdash \vdash$			
		Has the LMEF been visited to verify the directions and establish contacts?		
		Has site management reviewed WESTON's incident management procedures?		
		Have clinics and specialists that will help WESTON manage injuries and illnesses been identified?		
		Is there at least two (2) people certified in First Aid and CPR?		
		Are first aid kits available at the command post and appropriate remote locations?		
		Are first Aid Kits and Eyewash/Safety Showers inspected weekly?		
		Are 15 minute eyewash/safety showers in place if required?		

## FIRE PREVENTION AND PROTECTION 29 CFR 1926 Subpart F. EM 385-1-1, Section 9

	Is an Emergency Response and Contingency Plan in place?  Are emergency phone numbers posted?  Are fire extinguishers selected and provided based on the types of materials and potential fire classes in each area?  Are fire extinguishers provided in each administrative and storage trailer, within 50 ft but no closer than 25 ft of any fuel or flammable liquids storage, on welding and cutting equipment, on mechanical equipment?  Are fire extinguishers checked daily and inspected monthly?  Do site personnel know the location of fire extinguishers and how to use them?  Are flammable and combustible liquids stored in approved containers?  Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.  Are flammable and combustible liquids stored in flammable storage cabinets or appropriate storage areas?			
	Are fire extinguishers selected and provided based on the types of materials and potential fire classes in each area?  Are fire extinguishers provided in each administrative and storage trailer, within 50 ft but no closer than 25 ft of any fuel or flammable liquids storage, on welding and cutting equipment, on mechanical equipment?  Are fire extinguishers checked daily and inspected monthly?  Do site personnel know the location of fire extinguishers and how to use them?  Are flammable and combustible liquids stored in approved containers?  Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.			
	Are fire extinguishers provided in each administrative and storage trailer, within 50 ft but no closer than 25 ft of any fuel or flammable liquids storage, on welding and cutting equipment, on mechanical equipment?  Are fire extinguishers checked daily and inspected monthly?  Do site personnel know the location of fire extinguishers and how to use them?  Are flammable and combustible liquids stored in approved containers?  Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.			
	flammable liquids storage, on welding and cutting equipment, on mechanical equipment?  Are fire extinguishers checked daily and inspected monthly?  Do site personnel know the location of fire extinguishers and how to use them?  Are flammable and combustible liquids stored in approved containers?  Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.			
	Do site personnel know the location of fire extinguishers and how to use them?  Are flammable and combustible liquids stored in approved containers?  Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.			
	Are flammable and combustible liquids stored in approved containers?  Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.			
	Safety cans are used for dispensing flammable or combustible liquids in 5 gallon or less volumes.			
	Are flammable and combustible liquids stored in flammable storage cabinets or appropriate storage areas?			
	Are flammable materials separated from oxidizers by at least 20 feet (or 5 foot tall, ½ -hour rated fire wall) when in storage?			
	Are fuel storage tanks double walled or placed in a lined berm?			
	Spills are cleaned up immediately and wastes are disposed of properly.			
	Combustible scrap, debris, and waste material (oily rags) are stored in closed metal containers and disposed of promptly.			
	Vehicle fueling tanks are grounded and bonding between the tank and vehicle being fueled is provided?			
	LPG is stored, handled, and used according to OSHA regulations 29 CFR 1926.			
	LPG cylinders are not stored indoors.			
	Is a hot work permit program in place? See WESTON FLD-36			
	Is smoking limited to specific areas, prohibited in flammable storage areas and are signs posted to this effect?			
HAZARDOUS SUBSTANCES, AGENTS, AND ENVIRONMENTS 29 CFR 1926 Subparts D, Z. EM 385-1-1, Sections 6, 28				
NO	Are operations, materials and equipment evaluated to determine the presence of herordous conteminents or if herordous exents	COMMENT		
	could be released in the work environment?			
	·			
	Is there a site Specific Hazard Communication Program?			
	Spill kits appropriate for the hazardous materials present are on site and their location is known to spill responders.			
	Is disposal of excess hazardous chemicals performed according to WESTON's guidelines and RCRA regulations?			
		<ul> <li>Vehicle fueling tanks are grounded and bonding between the tank and vehicle being fueled is provided?</li> <li>□ LPG is stored, handled, and used according to OSHA regulations 29 CFR 1926.</li> <li>□ LPG cylinders are not stored indoors.</li> <li>□ Is a hot work permit program in place? See WESTON FLD-36</li> <li>□ Is smoking limited to specific areas, prohibited in flammable storage areas and are signs posted to this effect?</li> <li>HAZARDOUS SUBSTANCES, AGENTS, AND ENVIRONMENTS         29 CFR 1926 Subparts D, Z. EM 385-1-1, Sections 6, 28</li> <li>NO</li> <li>□ Are operations, materials and equipment evaluated to determine the presence of hazardous contaminants or if hazardous agents</li> </ul>		

## PERSONAL PROTECTIVE AND SAFETY EQUIPMENT, RESPIRATORY AND FALL PROTECTION 29 CFR 1926 Subparts D, E, M. EM 385-1-1, Section 5

YES	NO		COMMENT
		Do employees understand that the minimum PPE is hard hat, safety glasses with side shields and safety shoes or boots and that long pants and a sleeved shirt are required?	
		Has the SSHC reviewed the PPE requirements in the HASP against actual site conditions and certified that the PPE is appropriate? (see Field Manual, PPE Program)	
		PPE is inspected, tested and maintained in serviceable and sanitary condition as recommended by the manufacturer. Is defective or damaged equipment taken out of service and repaired or replaced?	
		Are workers trained in the use of the PPE required?	
		Are personnel exposed to vehicular or equipment traffic, including signal persons, spotters or inspectors required to vests or apparel marked with a reflective or high visibility material?	
		Is there a noise hazard? If yes, hearing protection will be required.	
		Is there a splash or splatter hazard? Face shields or goggles will be required.	
		Will personnel be working in or over water? Personnel Floatation devices will be required.	
		Is there a welding hazard? Welding helmet and leathers will be required. Is there a cutting torch hazard? Goggles and protective clothing will be required.	
		Is each person on a walking/working surface with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level protected from falling by the use of guardrail systems, safety net systems or personal fall arrest systems? See WESTON FLD 25 (Note General Industry standard is four feet).	
		Guardrail systems are used as primary protection whenever feasible. Guardrail construction meets criteria in 29 CFR 1926.502(b).	
		Personal fall arrest systems (PFAS) are inspected and appropriate for use.	
		Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses are from synthetic fibers.	
		Safety nets and safety net installations are constructed, tested and used according to 29 CFR 1926.502.c	
		Is respirator use required? See WESTON Respiratory Protection Program	
		Persons using respiratory protection have been successfully medically cleared, trained, and fit tested.	
		Respirators are used according to the manufacturer's instructions, regulatory requirements, selection criteria, and health and safety plan provisions.	
		For Level C operations with organic vapor contamination, is the cartridge change-out schedule documented?	
		Is breathing certified as Grade D, or better, and certification available on-site?	

# MACHINERY AND MECHANIZED EQUIPMENT 29 CFR 1926 Subparts N, O, CC and DD. EM 385-1-1, Sections 16, 17, 18

YE	S NO		COMMENT
		Are inspections of machinery by a competent person established?	
		Is equipment inspected daily before its next use?	
		Equipment inspection reports are reviewed, followed-up on negative findings and records of inspections are maintained?	
		Machinery or equipment found to be unsafe is taken out of service until the unsafe condition has been corrected.	
		Is there a preventive maintenance program established?	
		Are operators of equipment qualified and authorized to operate?	
		Is all self-propelled construction and industrial equipment equipped with a reverse signal alarm?	
		Are seats or equal protection provided for each person required to ride on equipment. Are seatbelts installed and worn on motor vehicles, as appropriate.	
		All equipment with windshields is equipped with powered wipers. If fogging or frosting is possible, operable defogging or defrosting devices are required.	
		Internal combustion engines are not operated in enclosed areas unless adequate ventilation is made. Air monitoring is conducted to assure safe working conditions.	
		Is each bulldozer, scraper, dragline, crane, motor grader, front-end loader, mechanical shovel, backhoe, or similar equipment equipped with at least one dry chemical or carbon dioxide fire extinguisher with a minimum rating of 5-B:C?	
		Will cranes or other lifting devices be used? If so, are the following documents available on site: 1) a copy of the operating manual, 2) load rating chart, 3) log book, 4) a copy of the last annual inspection and 5) the initial on-site inspection?	
		Do operators have certificates of training to operate the type of crane(s) to be used?	
		Is a signal person provided when the point of operation is not in full view of the vehicle, machine, or equipment operator? When manual (hand) signals are used, is only one person designated to give signals to the operator?	
		Signal persons back one vehicle at a time. While under the control of a signal person, drivers do not back or maneuver until directed. Drivers stop if contact with the signal person is lost.	
		Is a critical lift plan prepared by a competent person whenever:  a lift is not routine, or a lift exceeds 75% of a crane's capacity, a lift results in the load being out of the operator's line of sight, or a lift involves more than one crane, a man basket is used, or the operator believes there is a need for a critical lift plan.	
		Fork Lifts (Powered Industrial Trucks) - Will forklifts be used on site?	
		All forklifts meet the requirements of design, construction, stability, inspection, testing, maintenance, and operation as indicated in ANSI/ASME B56.1 Safety Standards for Low Lift and High Lift Trucks.	
		Do forklift operators have certificates of training?	
		Are pile driving operations conducted according to EM 385-1-1, Section 16.L?	
		Is drilling equipment operated, inspected, and maintained as specified in the manufacturer's operating manual? Is a copy of the manual available at the work-site? See also the Drilling Safety Guide in the Safety Officers Field Manual.	
		Are flag persons provided when operations or equipment on or near a highway expose workers to traffic hazards? Do flag persons and persons working in proximity to a road wear high visibility vests? Are persons exposed to highway vehicle traffic protected by signs in all directions warning of the presence of the flag persons and the work? Do signs and distances from the work zone conform to federal and local regulations?	

#### MOTOR VEHICLES 29 CFR 1926 Subpart O. EM 385-1-1, Section 18

YES	NO		COMMENT
		Motor vehicle operators have a valid permit, license, or certification of ability for the equipment being operated.	
		Inspection, maintenance, and repair is according to manufacturer's requirements by qualified persons.	
		Vehicles are inspected on a scheduled maintenance program.	
		Vehicles not in safe operating condition are removed from service until defects are corrected.	
		Glass in windshields, windows, and doors is safety glass. Any cracked or broken glass is replaced.	
		Seatbelts are installed and worn.	
		The number of passengers in passenger-type vehicles does not exceed the number which can be seated.	
		Trucks used to transport personnel have securely anchored seating, a rear end gate, and a guardrail.	
		No person is permitted to ride with arms or legs outside of a vehicle body; in a standing position on the body; on running boards; seated on side fenders, cabs, cab shields, rear of the truck or on the load.	
		ATV operators possess a valid state driver's license, have completed an ATV training course prior to operation of the vehicle, and wear appropriate protective equipment such as helmets, boots, and gloves.	
		EXCAVATING AND TRENCHING 29 CFR 1926 Subpart P. EM 385-1-1, Section 25	
YES	NO		COMMENT
		Has the known or estimated location of utility installations such as sewer, telephone, fuel, electric, water lines, or any other underground installations that may be expected to be encountered during excavation been determined before excavation? Have utility locations been verified by designated state services according to state regulations? Has the client provided clearance where state jurisdiction doesn't apply?	
		Have overhead utilities in excavation areas been identified and either de-energized, shielded or barricaded so excavating equipment will not come within 10 feet?	
		Are inspections of the excavation, the adjacent areas, and protective systems made daily and as necessary by a competent person?	
		Are Protective systems in place as prescribed by the competent person?	
		Is material removed from excavations managed so it will not overwhelm the protective systems?	
		Are barriers provided between excavations and walkways?	
		Are excavations by roadways barricaded to warn vehicles of presence or to prevent them from falling in?	
		Is there a means of exit from the excavation every 25 feet?	
		Is air monitoring required? If yes, Is it performed?	
		CONFINED SPACES	
		29 CFR 1910 Subpart J. EM 385-1-1, Section 6	
YES	NO	In those a Confined Conce Entry Draware in place?	COMMENT
		Is there a Confined Space Entry Program in place?	
$\sqcup$	$\sqcup$	Are the confined Spaces identified and labeled?	
		Will the Confined Spaces be entered?	
		Is appropriate entry documentation used and on-file?	

## ELECTRICAL 29 CFR 1926 Subpart K. EM 385-1-1, Section 11

YES	NO		COMMENT
		Are electrical installations made according to the National Electrical Code and applicable local codes?	
		Qualified electricians make all connections and perform all work within 10 feet of live electric equipment.	
		Location of underground, overhead, under floor, behind wall electrical lines is known and communicated. Lines are documented by qualified person as de-energized where necessary.	
		Workers understand they must not work near live parts of electric circuits, unless they are qualified as required by OSHA or are protected by de-energizing and grounding the parts, guarding the parts by insulation, or other effective means?	
		Employees who regularly work on or around energized electrical equipment or lines are instructed in the cardiopulmonary resuscitation (CPR) methods.	
		Workers are prohibited from working alone on energized lines or equipment over 600 volts.	
		Are Ground-fault circuit interrupters (GFCl's) or is ground fault circuit protection provided to protect employees from ground-fault hazards for all 115 – 120 Volt, 15 and 20 amp receptacle outlets which are not a part of the permanent wiring of a building or structure at construction sites?	
		Circuit breakers are labeled.	
		Circuit breaker and all cabinets with exposed electric conductors are kept tightly closed.	
		Unused openings (including conduit knockouts) in electrical enclosures and fittings are closed with appropriate covers, plugs, or plates.	
		Sufficient access and working space is provided and maintained about all electrical equipment to permit ready and safe operations and maintenance.	
		Motors are located within sight of their controllers or controller disconnecting means are capable of being locked in the pen position or is a separate disconnecting means installed in the circuit within sight of the motor.	
		Are visual inspections of extension cords and cord-and plug-connected equipment conducted daily? Is equipment found damaged or defective tagged and removed from service, and not used until repaired?	
		Wet Areas - Is portable lighting used in wet or conductive locations, such as tanks or boilers operated at no more than 12 volts and protected by GFCIs.	
		Are electrical installations in hazardous areas to NEC?	
		Metal ladders and tools including tape measures or fabric with metal thread are prohibited where contact with energized electrically parts is possible.	
		All extension cords are the three-wire type, designed and rated for hard or extra hard usage?	
		Worn or frayed electrical cords or cables are taken out of service. Fastening with staples, hanging from nails or suspending extension cords by wire is prohibited.	
		Electric wire/flexible cord passing through work areas is protected from damage such as foot traffic, vehicles, sharp corners, projections and pinching? Flexible cords and cables passing through holes are protected by bushings or fittings?	
		Before an employee or contractor performs any service or maintenance on a system where the unexpected energizing, start up, or release of kinetic or stored energy could occur and cause injury or damage, the system is to be isolated. Only authorized persons may apply and remove lockouts and tags.	
		Contractors planning to use hazardous energy control procedures submit their hazardous energy control plan to the WESTON site safety officer or designee before implementing lockout/tagout procedures.	
		There is a site specific hazardous energy control plan that clearly and specifically outlines the scope, purpose, authorization, rules and techniques to be used for the control of hazardous energy.	
		Workers possess the knowledge and skills required for the safe application, usage, and removal of energy controls.	

#### WELDING AND CUTTING 29 CFR 1926 Subpart J. EM 385-1-1, Section 10

YE	S NO	0		COMMENT
			Prior to performing welding, cutting or any other heat or spark producing activity, an assessment of the area is made by a competent person to identify combustible materials and potential sources of flammable atmospheres.	
			Welders, cutters and their supervisors are trained in the safe operation of their equipment, safe welding and cutting practices, hot work permit requirements, and fire protection.	
			Welding and cutting equipment is inspected daily before use. Unsafe equipment is taken out of use, replaced, or repaired.	
			Workers and the public are shielded from welding rays, flashes, sparks, molten metal, and slag.	
			Employees performing welding, cutting, or heating are protected by PPE appropriate for the hazards (e.g., respiratory, vision and skin protection).	
			Compatible fire extinguishing equipment is provided in the immediate vicinity of welding or cutting operations.	
			Drums, tanks, or other containers and equipment which have contained hazardous materials shall be thoroughly cleaned before welding or cutting. Cleaning shall be performed in accordance with NFPA 327, <u>Cleaning or Safeguarding Small Tanks and Containers</u> , ANSI/AWS F4.1, <u>Recommended Safe Practices for the Preparation for Welding and Cutting of Containers That Have Held Hazardous Substances</u> , and applicable health and safety plan requirements.	
			HAND AND POWER TOOL SAFETY 29 CFR 1926 Subpart I. EM 385-1-1, Section 13	
YE	S NO	O		COMMENT
YE			Power tools are from a manufacturer listed by a nationally recognized testing laboratory for the specific application for which they are to be used.	COMMENT
				COMMENT
			are to be used.  Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.  Tools found to be unsafe are not used, tagged and repaired or destroyed.	COMMENT
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			are to be used.  Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.  Tools found to be unsafe are not used, tagged and repaired or destroyed.  Users of tools are trained in safe use.  Electrical tools have cords and plug connections in good repair.  Electrical tools are effectively grounded or approved double insulated.  Reciprocating, rotating, and moving parts of equipment are guarded if they may be accessed by employees or they otherwise create a hazard.	COMMENT
			are to be used. Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.  Tools found to be unsafe are not used, tagged and repaired or destroyed.  Users of tools are trained in safe use.  Electrical tools have cords and plug connections in good repair.  Electrical tools are effectively grounded or approved double insulated.  Reciprocating, rotating, and moving parts of equipment are guarded if they may be accessed by employees or they otherwise create a hazard.  Safety clips/retainers are installed and maintained on pneumatic impact tool connections.	COMMENT
			are to be used.  Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.  Tools found to be unsafe are not used, tagged and repaired or destroyed.  Users of tools are trained in safe use.  Electrical tools have cords and plug connections in good repair.  Electrical tools are effectively grounded or approved double insulated.  Reciprocating, rotating, and moving parts of equipment are guarded if they may be accessed by employees or they otherwise create a hazard.	COMMENT
			are to be used. Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.  Tools found to be unsafe are not used, tagged and repaired or destroyed.  Users of tools are trained in safe use.  Electrical tools have cords and plug connections in good repair.  Electrical tools are effectively grounded or approved double insulated.  Reciprocating, rotating, and moving parts of equipment are guarded if they may be accessed by employees or they otherwise create a hazard.  Safety clips/retainers are installed and maintained on pneumatic impact tool connections.  Chain saws have an automatic chain brake or anti-kickback device.  Pneumatic and hydraulic hoses and fittings are inspected regularly.	COMMENT
			are to be used.  Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.  Tools found to be unsafe are not used, tagged and repaired or destroyed.  Users of tools are trained in safe use.  Electrical tools have cords and plug connections in good repair.  Electrical tools are effectively grounded or approved double insulated.  Reciprocating, rotating, and moving parts of equipment are guarded if they may be accessed by employees or they otherwise create a hazard.  Safety clips/retainers are installed and maintained on pneumatic impact tool connections.  Chain saws have an automatic chain brake or anti-kickback device.  Pneumatic and hydraulic hoses and fittings are inspected regularly.  Employees who operate powder actuated tools are trained and carry valid operator's cards.	COMMENT
			are to be used. Hand & power tools are inspected, maintained, tested, and determined to be in safe operating condition before use.  Tools found to be unsafe are not used, tagged and repaired or destroyed.  Users of tools are trained in safe use.  Electrical tools have cords and plug connections in good repair.  Electrical tools are effectively grounded or approved double insulated.  Reciprocating, rotating, and moving parts of equipment are guarded if they may be accessed by employees or they otherwise create a hazard.  Safety clips/retainers are installed and maintained on pneumatic impact tool connections.  Chain saws have an automatic chain brake or anti-kickback device.  Pneumatic and hydraulic hoses and fittings are inspected regularly.	COMMENT

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Powder actuated tool operators have appropriate PPE.

#### RIGGING 29 CFR 1926 Subpart H. EM 385-1-1, Section 15

YES	NO		COMMENT
		Rigging equipment is inspected as specified by the manufacturer, by a qualified person, before use on each shift and as necessary to assure that it is safe.	
		Defective equipment is removed from service.	
		Rigging not in use is removed from the work area, properly stored, and maintained in good condition.	
		Wire rope removed from service for defects is cut up or plainly marked as unfit for use as rigging.	
		The number of saddle clips used to form eyes in wire rope conforms with Table H-20, are spaced evenly and the saddles are on the live side.	
		Chain rigging has a tag clearly indicating load limits, is inspected before initial use, then weekly, and is of alloyed metal.	
		Fiber rope rigging is not used if it is frozen or has been subject to acids or excessive heat.	
		Slings and their fittings and fastenings are inspected before use on each shift and as needed during use.	
		Drums, sheaves, and pulleys on rigging hardware are smooth and free of surface defects that can damage rigging.	
YES	NO	MATERIAL HANDLING, STORAGE, AND DISPOSAL 29 CFR 1926 Subpart H. EM 385-1-1, Section 14	COMMENT
		Employees are trained in and use safe lifting techniques.	COMMENT
		Materials are not moved or suspended over workers unless positive precautions have been taken to protect workers.	
片		Conveyors are constructed, inspected, & maintained by qualified persons according to manufacturer's recommendations.	
		All conveyors are to be equipped with emergency stopping devices.	
		Hazardous exposed moving machine parts are guarded mechanically, electrically or by location.	
		Controls are clearly marked and/or labeled to indicate the function controlled.	
H		Taglines are used for suspended loads where the movement may be hazardous to persons.	
H		Material in storage is protected from falling or collapse by effective stacking, blocking, cribbing, etc.	
		Walkways and aisles are to be kept clear.	
		Materials are not stored on scaffolds or runways in excess of normal placement or in excess of safe load limits.	
		Work areas and means of access are maintained safe and orderly.	
		Tools, materials, extension cords, hoses or debris do not cause tripping or other hazards.	
		Storage and construction sites are kept free from the accumulation of combustible materials.	
		Waste materials and rubbish are placed in containers or, if appropriate, in piles. Waste materials are disposed of in accord with applicable local, state, or federal requirements.	

# FLOATING PLANT AND MARINE ACTIVITIES 29 CFR 1926 Subpart O. EM 385-1-1 Section 19

YES	NO		COMMENT
		Floating plants that are regulated by the USCG have current inspections and certificates.	
		Before any floating plant is brought to the job site and placed in service it is inspected and determined to be in safe operating condition	
		Periodic inspections are made such that safe operating conditions are maintained. Strict compliance with EM 385-1-1, Section 19 is expected.	
		Plans are in place for removing or securing the plant and evacuation of personnel endangered by severe weather and other marine emergencies such as; fire, flooding, man overboard, hazardous materials incidents, etc.	
		Means of access are properly secured, guarded, and maintained free of slipping and tripping hazards.	
		Dredging operations follow guidelines as established in EM 385-1-1, Section 19.D.	

# PRESSURIZED EQUIPMENT AND SYSTEMS 29 CFR 1926 Subparts I, F. EM 385-1-1, Section 20

YES	NO		COMMENT
		Pressurized equipment and systems are inspected before being placed into service.	
		Pressurized equipment or systems found to be unsafe are tagged "Out of Service-Do Not Use".	
		Systems and equipment are operated, inspected, and maintained by qualified, designated personnel.	
		Safe clearance, lockout/tagout procedures are followed as appropriate during maintenance or repair.	
		Air hose, pipes, fittings are pressure-rated for the activity. Defective hoses are removed from service.	
		Hoses aren't laid over ladders, steps, scaffolds, or walkways in a manner that creates a tripping hazard.	
		The use of compressed air for personal cleaning is prohibited. The use of compressed air for other cleaning is restricted to less than 30 psig.	
		Compressed gas cylinders are stored in well-ventilated locations.	
		Cylinders in storage are separated from flammable or combustible liquids and from easily ignitable materials by at least 40 feet or by a minimum five feet tall, ½ -hour fire resistive partition.	
		Stored cylinders containing oxidizing gases are separated from fuel gas cylinders by at least 20 feet or by a minimum five feet tall, ½ -hour fire resistive partition.	
		Cylinder valve caps are in place when cylinders are in storage, in transit, or a regulator is not in place.	
		Compressed gas cylinders in service are secured in substantial fixed or portable racks or hand trucks.	
		Oxygen cylinders and fittings are kept away from, and free from oil and grease.	
		Cylinder Storage areas are posted with the names of the gases in storage and with signs indicating "No Smoking or Open Flame".	
		Cylinders are to be stored such that mechanical and corrosion damage is avoided. Cylinders are not to be stored in areas required as an egress path.	
		Cylinders may be stored in the open outdoors, however, they must be protected from the ground to prevent corrosion and must be protected from temperatures that may exceed 125 degrees F.	

### WORK PLATFORMS/SCAFFOLDS 29 CFR 1926 Subparts L, M, N. EM 385-1-1 Sections 21, 22

YES	NO		COMMENT						
		Work platforms are erected, used, inspected, tested, maintained and repaired according to manufacturer's requirements.							
		Construction, inspection, and disassembly of scaffolds is under the direction of a competent person.							
		Workers on scaffolding have been trained by a qualified person.							
		Scaffolds are erected on a firm and level surface and are square and plumb.							
	Scaffolds are not loaded in excess of rated capacity.								
		Working levels of work platforms are fully planked or decked.							
		Planks are in good condition and free from obvious defects.							
		Fabricated frame scaffolding four times higher than the base width is secured to building/structure according to manufacturer's instruction and/or OSHA requirements.							
		Working platforms of scaffolding over ten feet in height have guard rails meeting OSHA specifications. Fall protection is suggested at four feet or greater.							
		Scaffolding/work platforms are accessed by means of a properly secured ladder or equivalent. Built on ladders conform to scaffold ladder requirements. Climbing of braces is not allowed.							
		Crane supported work platforms are designed and used in accordance with OSHA standards.							
		Elevating work platforms are operated, inspected, and maintained according to the equipment operations manual.							
		Employees working in aerial lifts remain firmly on the floor of the basket. Employees use fall protection while in an aerial lift basket.							
- VEO	Luo	WALKING AND WORKING SURFACES AND STAIRS 29 CFR 1926 Subparts L, M, X. EM 385-1-1, Sections 21, 22, 24	LOOMENT						
YES	NO	Work areas are clean, sanitary, and orderly	COMMENT						
닏									
	닏	Work surfaces are kept dry or appropriate means are taken to assure the surfaces are slip-resistant							
	닏	Accumulations of combustible dust are routinely removed.							
		Aisles and passageways are kept clear and marked as appropriate.							
Щ		There is safe clearance for walking in aisles where motorized or mechanical handling equipment is operating.							
		Materials or equipment is stored in such a way that sharp projections will not interfere with the walkway.							
		Changes of direction or elevation are readily identifiable.							
		. Aiclae or walkwaye that pace poor moving or aparating machinary, walding aparatione or cimilar aparatione are arranged							
		Aisles or walkways that pass near moving or operating machinery, welding operations or similar operations are arranged so employees will not be subjected to potential hazards.							
		so employees will not be subjected to potential hazards.  Standard guardrails are provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground and bridges provided where workers must cross over conveyors and similar hazards.							
		so employees will not be subjected to potential hazards.  Standard guardrails are provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground and bridges provided where workers must cross over conveyors and similar hazards.  There are standard stair rails or handrails on all stairways having four or more risers or with an elevation of 30 or more inches.							
		so employees will not be subjected to potential hazards.  Standard guardrails are provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground and bridges provided where workers must cross over conveyors and similar hazards.							

		Stairway handrails are not less than 36 inches above the leading edge of stair treads and have at least 3 inches of clearance	
	Ш	between the handrails and the wall or surface they are mounted on.	
		Where doors or gates open directly on a stairway, there is a platform provided so the swing of the door does not reduce the width	
	Ш	of the platform to less than 20 inches.	
		Where stairs or stairways exit directly into any area where vehicles may be operated, there are adequate barriers and warnings	
		provided to prevent employees stepping into the path of traffic.	
		Signs are posted showing the load capacity of elevated storage areas.	
		An appropriate means of access and egress is provided for surfaces with 19 or more inches of elevation change.	
		Material on elevated surfaces is minimized, with that necessary for immediate work requirements piled, stacked, or racked in a	
		manner to prevent it from tipping, falling, collapsing, rolling, or spreading.	
		FLOOR AND WALL HOLES AND OPENINGS 29 CFR 1926 Subpart M. EM 385-1-1, Section 24	
YES	NO		COMMENT
YES	NO 🔲		COMMENT
YES	NO 🗆	29 CFR 1926 Subpart M. EM 385-1-1, Section 24	COMMENT
YES	NO □	29 CFR 1926 Subpart M. EM 385-1-1, Section 24  Floor and roof openings that persons can walk into or fall through are guarded by a physical barrier or covered.  Holes (defined as equal to or greater than 2 inches in least dimension) where person could trip must be covered/protected.  Unprotected sides and edges on a walking/working surface six feet or more (note four feet in General Industry) are protected by	COMMENT
YES	NO □	29 CFR 1926 Subpart M. EM 385-1-1, Section 24  Floor and roof openings that persons can walk into or fall through are guarded by a physical barrier or covered.  Holes (defined as equal to or greater than 2 inches in least dimension) where person could trip must be covered/protected.  Unprotected sides and edges on a walking/working surface six feet or more (note four feet in General Industry) are protected by guardrail system, safety net, or Personal Fall Arrest System (PFAS).	COMMENT
YES	NO O	29 CFR 1926 Subpart M. EM 385-1-1, Section 24  Floor and roof openings that persons can walk into or fall through are guarded by a physical barrier or covered.  Holes (defined as equal to or greater than 2 inches in least dimension) where person could trip must be covered/protected.  Unprotected sides and edges on a walking/working surface six feet or more (note four feet in General Industry) are protected by guardrail system, safety net, or Personal Fall Arrest System (PFAS).  Unused portions of service pits and pits not actually in use are either covered or protected by guardrails or equivalent.	COMMENT
YES	NO O	29 CFR 1926 Subpart M. EM 385-1-1, Section 24  Floor and roof openings that persons can walk into or fall through are guarded by a physical barrier or covered.  Holes (defined as equal to or greater than 2 inches in least dimension) where person could trip must be covered/protected.  Unprotected sides and edges on a walking/working surface six feet or more (note four feet in General Industry) are protected by guardrail system, safety net, or Personal Fall Arrest System (PFAS).  Unused portions of service pits and pits not actually in use are either covered or protected by guardrails or equivalent.  Coverings for holes or other openings must be constructed of sufficient strength to support any anticipated load, must be secured	COMMENT
YES O	NO	29 CFR 1926 Subpart M. EM 385-1-1, Section 24  Floor and roof openings that persons can walk into or fall through are guarded by a physical barrier or covered.  Holes (defined as equal to or greater than 2 inches in least dimension) where person could trip must be covered/protected.  Unprotected sides and edges on a walking/working surface six feet or more (note four feet in General Industry) are protected by guardrail system, safety net, or Personal Fall Arrest System (PFAS).  Unused portions of service pits and pits not actually in use are either covered or protected by guardrails or equivalent.	COMMENT

### LADDERS 29 CFR 1926 Subpart X. EM 385-1-1, Section 21

YES	NO		COMMENT					
		Portable ladders are used for their designed purpose only.						
		Portable ladders are examined for defects prior to, and after use.						
		Ladders found to be defective are clearly tagged to indicate "DO NOT USE" if repairable, or destroyed immediately if no repair is possible.						
		Workers are trained in hazards associated with ladder use and how to inspect ladders.						
		Ladders have secure footing provided by a combination of safety feet, top of ladder tie-offs and mud cills or a person holding the ladder to prevent slipping.						
		The handrails of a straight ladder used to get from one level to another extend at least 36 inches above the landing.						
		Ladders conform to construction criteria of ANSI Standards A-14.1 and A-14.2.						
		Wooden ladders are not painted with an opaque covering such that signs of flaws, cracks, or drying are obscured.						
		Fixed ladders are constructed and used according to OSHA Standards, 29 CFR 1910.27 and ANSI A-14.3.						
		Rungs, cleats or steps, and side rails that may be used for handholds when climbing, offer adequate gripping surface and are free of splinters, slivers or burrs, and substances that could cause slipping.						
		Fixed ladders of greater than 24 feet have cages or other approved fall protection devices. (Note General Industry is 20 feet).						
	Where fall protection is provided by ladder safety systems (body belts or harnesses, lanyards and braking devices with safety lines or rails), systems meet the requirements of and are used in accordance with WESTON Fall Protection Standard Practices and are compatible with construction of the ladder system.							
		DEMOLITION 29 CFR 1926 Subpart T. EM 385-1-1, Section 23						
YES	NO	20 01 K 1020 000 park 11 2m 000 1 1, 000 an 120	COMMENT					
		Prior to initiating demolition activities an engineering survey (by a competent person) and a demolition plan (by a competent person) is completed.						
		All employees engaged in demolition activities are instructed in the demolition plan.						
		It has been determined through the engineering survey and outlined in the plan, if any hazardous materials or conditions (e.g., asbestos, lead, utility connections, etc.) exist. Such hazards are controlled or eliminated before demolition is started.						
		Continued inspections, by a competent person, are conducted to ensure safe employee working conditions.						
TREE MAINTENANCE AND REMOVAL 29 CFR 1910 Subpart R. EM 385-1-1, Section 31								
YES	NO		COMMENT					
		Tree maintenance or removal is done is under the direction of a qualified person.						
		Tree work, in the vicinity of charged electric lines, is by trained persons qualified to work with electricity and tree work.  Appropriate distances are maintained for all workers who are not qualified.						
		Equipment is inspected, maintained, repaired, and used in accordance with the manufacturer's directions.						
		Prior to felling actions are planned to include clearing of the area to permit safe working conditions and escape.						
		Employees must be trained in the safe operation of all equipment.						
		All equipment and machinery is inspected and determined safe prior to use.						

]   [	] Wor	k is performed under requirements of FLD 43.							
	BLASTING 29 CFR 1926 Subpart U. EM 385-1-1, Section 29								
YES	NO	•	COMMENT						
		A blasting safety plan is developed prior to bringing explosives on-site.							
		The transportation, handling, storage, and use of explosives, blasting agents, and blasting equipment must be directed and supervised by a person with proven experience and ability in blasting operations. Licensing of person is verified.							
		Blasting operations in or adjacent to cofferdams, piers, underwater structures, buildings, structures, or other facilities must be carefully planned with full consideration to potential vibration and damage.							
	HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE AND UNDERGROUND STORAGE TANK (UST) ACTIVITIES  29 CFR 1926 Subpart D. EM 385-1-1, Section 28								
YES	NO		COMMENT						
		All construction activities performed with known or potential exposure to hazardous waste are conducted in accordance with Hazardous Waste Operations and Emergency Response requirements.							
		CONCRETE and MASONRY CONSTRUCTION 29 CFR 1926 Subpart Q. EM 385-1-1, Section 27							
YES	NO		COMMENT						
		Construction loads are not placed on a concrete or masonry structure or portion of a concrete or masonry structure unless the employer determines, based on information from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the loads.							
		Employees are not permitted to work above or in positions exposed to protruding reinforcing steel or other impalement hazards unless provisions have been made to control the hazard.							
		Sections of concrete conveyances and airlines under pressure are secured with wire rope (or equivalent material) in addition to the regular couplings or connections.							
		Structural and reinforcing steel for walls, piers, columns, and similar vertical structures is supported and/or guyed to prevent overturning or collapse							
		All form-work, shoring, and bracing is designed, fabricated, erected, supported, braced, and maintained so it will safely support all vertical and lateral loads that may be applied until the loads can be supported by the structure.							
		Shoring equipment is inspected prior to erection to determine that it is specified in the shoring design. Any equipment found to be damaged is not used.							
		Erected shoring equipment is inspected immediately prior to, during, and immediately after the placement of concrete. Any shoring equipment that is found to be damaged, displaced, or weakened is immediately reinforced or re-shored.							
		Shoring, vertical slip forms and jacks conform with requirements of Section 27.B.08-13 of USACE EM 385-1-1.							
		Forms and shores (except those on slab or grade and slip forms) are not removed until the individual responsible for forming and/or shoring determines that the concrete has gained sufficient strength to support its weight and all superimposed loads.							
		Precast concrete members are adequately supported to prevent overturning or collapse until permanent connections are complete							
		No one is permitted under pre-cast concrete members being lifted or tilted into position except employees required for the erection of those members.							
		Lift slab operations are planned and designed by a registered engineer or architect.							
		Hydraulic jacks used in lift slab construction have a safety device that causes the jacks to support the load in any position if the jack malfunctions							
		No one is permitted under the slab during jacking operations							

	A limited access zone is established whenever a masonry wall is being constructed.	
	Fall protection is provided to masonry workers exposed to falls of 6 feet or more.	

# STEEL ERECTION 29 CFR 1926 Subpart R. EM 385-1-1, Section 27

		25 Of R 1520 Subpart R. Lin 500 1 1, Scotion 27						
YES	NO		COMMENT					
		Impact wrenches have a locking device for retaining the socket. Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.						
	Structural and reinforcing steel for walls, piers, columns, and similar vertical structures shall be guyed and supported to prevent collapse							
		No loading is placed upon steel joists until all bridging is completely and permanently installed.						
		Workers are provided fall protection whenever they are exposed to falls of 1.8 m (6 ft) or more (EM 385-1-1).						
	Temporary flooring in skeleton steel erection conforms with Section 27.F of USACE 385-1-1							
		ROOFING 29 CFR 1926 Subpart M. EM 385-1-1, Sections 21, 22, 24, 27						
Yes	No		COMMENT					
		In the construction, maintenance, repair, and demolition, of roofs, fall protection systems is provided that will prevent personnel from slipping and failing from the roof and prevent personnel on lower levels from being struck by falling objects						
		On all roofs greater than 4.8 m (16 ft) in height, a hoisting device, stairways, or progressive platforms are furnished for supplying materials and equipment.						
		Roofing materials and accessories that could be moved by the wind, including metal roofing panels, that are on the roof and unattached are secured when wind speeds are greater than, or are anticipated to exceed, 10 mph.						
		Level, guarded platforms are provided at the landing area on the roof.						
		When their use is permitted, warning line systems comply with USACE Section 27.07 of EM 385-1-1.						
		Workers involved in roof-edge materials handling or working in a storage area located on a roof with a slope -/= to four vertical to twelve horizontal and with <u>edges 6 ft or more above</u> lower levels are protected by the use of a guardrail, safety net, or personal fall arrest system along all unprotected roof sides and edges of the area.						

#### **ENVIRONMENTAL COMPLIANCE**

Yes	No	Comments								
		Environmental Compliance and Waste Management Plan on file.								
		Waste Determination Made.								
		Manifest and/or Shipping Papers prepared and filed.								
		Manifest Exception Reports Prepared, as necessary. Procedures to track manifests in place.								
		State Annual and EPA Biennial Reporting Information Available.								
		RCRA Personnel Training Records on file.								
		CAA Permits on file.								
		CWA Permits on file.								
		RCRA Permits on file.								
		State and/or Local Permits on file.								
		RCRA Inspections conducted and Documentation on file.								
		Transporter and TSD compliance information on file.								
		Waste Accumulation Areas Managed Properly.								
		Wetlands Areas Identified and Protected.								
		Endangered, Threatened, or Special Concern Species or Areas Identified and Protective Methods Determined.								
		Run-on and Runoff Concerns Identified and Managed.								
		Adjacent Land Areas Protected as Necessary.								
		Non-Hazardous Solid Wastes Managed Properly.								
		MISCELLANEOUS REGULATORY and POLICY COMPLIANCE								
Yes	No		Comments							
		Personnel Training Records for DOT Materials Handling on file.								
		Noise Control Issues Addressed and Managed.								
		Site Security Issues Identified and Managed.								
		Known Historical, Archeological, and Cultural Resources Identified and Managed.								
		WESTON EHS Analysis Checklist In Use.								
		Safety Observation and Recognition Program in place.								
		Weekly EHS Report Card System in place.								
		Federal, State, and Local Required Postings in place.								
		Site specific Lockout/Tagout Program is in place.								
		Site-specific Confined Space Program is in place.								
		Site Safety Officer filing system is in place and up to date.								

### ATTACHMENT I HAZARD CHECKLIST

#### **EHS REVIEW CHECKLIST-WESTON FIELD OPERATIONS**

This form is to be completed prior to performing an EHS review of a Field Project to what hazards have been anticipated and determine which elements of the BBS EHS Field Review Checklist apply and capture positive observations and Corrective Action items. The BBS EHS Field Review Checklist elements will serve as a guide for the review.

Site Manager/EHS Officer: John Sherrard Date: 29-Jul-13 Location: South Dayton Dump Site				SOW: Soil Gas Sampling, PRP Oversight.  Team (name or reference via daily sign-in sheet) Weston Team Contractors						
HAZARDS IDENTIFIED (check those applicable)				I am confid HASP	ent ha	nzard is identified and controls id	entified ii	Y = Under control +; N	= need	s work -
	Chemical		Biological			Physical		Physical, con't		Physical, con't
	Flammable/combustible	Υ	Insects		Υ	Noise		Aerial lifts		Remote Areas
	Corrosive	Υ	Animals		Υ	Heat		Conveyors		Materials handling
	Oxidizer	Υ	Plants		Υ	Cold		Demolition		High Pressure Washers
	Reactive	Υ	Mold/Fungus		Υ	Inclement Weather		Excavation	Υ	Hand and Power Tools
Υ	Toxic		Viral/Bacterial			Hot Work		Pile Driving	Υ	Low Illumination
Υ	Inhalation					Confined Spaces		Welding/Cutting/Burn	Υ	Drilling & Boring
Υ	Eyes/Skin		Radiological			Stored hazardous Energy		Hot Surfaces	Υ	Striking against/Struck-by
	Pesticides		Ultra-Violet			Elevation		Hot Materials		Caught-in/Caught between
	Carcinogen	Υ	Sunlight		Υ	Utilities		Rough Terrain		Pushing/pulling
	Asbestos		Infrared			Machinery	Υ	Compressed Gases	Υ	Falls at same level
	Lead		Lasers			Mobile equipment		Hazardous Mat. Storage		Falls from elevation
	UXO/OE/ CWM		XRF			Cranes		Diving		Repetitive motion
	Process Safety		Density Gauges			Manual Material Handling		Operation and Use of Boats	Υ	Electricity (110V or less)
	Applying Paint/Coatings		Isotopes			Ladders		Working Over Water		Electricity (> 110V)
						Scaffolding	Υ	Traffic		Slippery surface Ice/Snow
								Site Security		
	Motor Vehicle Operation		Working at Elev	ation/		Electrical				DG Shipping
Υ	Highway - Passenger		Falls from elevat	ion		Electricity (>600V)				Air Ship
	Highway – Pickup		Ladders			Electricity (> 50V)				Bulk surface ship
	Special – ATV/Utility		Scaffolding			Electricity (50V or less)				
			Aerial lifts			Stored Hazardous Energy				
						Utilities				
ENR	RIVORNMENTAL RISK IDENTIF	IED (ch	eck applicable)			onfident that the hazards are in	dentified	d and Y = Under Control N = Needs Work		
	Air - Emission Source		Water - CWA			Other Solid Waste		DG Shippping		
	List Permits Needed		Storm Water			Land - CERCLA		IATA – by Air		
			SDWA			Other Environmental		DOT – by ground		
			NPDES			Team Contractor				
			Waste - RCRA/T	SCA						

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UIRED PROTECTION (che	ck tho	se applicable)				nd contro	Y = Under Control N = Needs Work		
Engineering Controls		Administrative	Control		PPE		PPE, con't		Contingency
Guard Rails	Υ	Qualified for task			Air Supplying Respirator		Level A	Υ	Emergency Plan Known
Machine Guards	Υ	Trained/Certified			SCBA		CWM	Υ	Eye wash/shower Location
Sound Barriers		Hot Work Permit			Air Purifying Respirator	Υ	Safety Shoes/Boots	Υ	First Aid Kit Location
Enclosure		CSE Permit		Υ	Hard Hat		Rubber Boots		Fire Extinguisher Locatio
Elevation		Lockout/Tag Out		Υ	Ear Plugs	Υ	Gloves –Nitrile Surgical		Spill Kit Location
Isolation		Work Permit			Ear Muffs	Υ	Gloves – Leather work		Severe weather shelter
GFCI		Dig Safe Permit		Υ	Safety Glasses		Gloves	Υ	Evacuation Routes
Assured Ground Program		Contingency Plan	n		Goggles		Cooling Suits		
Apply Anti-slip/skid Mat		Critical Lift Plans			Chemical Goggles		Ice Vests		
		Equip. Inspection	Sheets		Face Shield		Radiant heat Suits		
					Thermal Shield		Fall Arrest		
					Welding Mask		PFD		
					Cutting Glasses		Electrical insulation		
					Cotton Coverall		Welding Leathers		
					Tyvek Coveralls				
					Coated Coveralls		Diving/SCUBA		
							Diving/Surface Supplied		
Modification to Tasks (list	)					at may	Reasons for any ch	anges	indicated above
	Engineering Controls Guard Rails Machine Guards Sound Barriers Enclosure Elevation Isolation GFCI Assured Ground Program Apply Anti-slip/skid Mat	Engineering Controls Guard Rails Machine Guards Sound Barriers Enclosure Elevation Isolation GFCI Assured Ground Program	Guard Rails  Machine Guards  Y  Trained/Certified  Sound Barriers  Hot Work Permit  Enclosure  Elevation  Isolation  GFCI  Assured Ground Program  Apply Anti-slip/skid Mat  Critical Lift Plans  Equip. Inspection	Engineering Controls  Guard Rails  Machine Guards  Sound Barriers  Enclosure  Elevation  Isolation  GFCI  Assured Ground Program  Apply Anti-slip/skid Mat  Modification to Tasks (list)  Engineering Controls  Administrative Control  Qualified for task  Y Qualified for task  Hot Work Permit  CSE Permit  Lockout/Tag Out  Isolation  Work Permit  Contingency Plan  Critical Lift Plans  Equip. Inspection Sheets	Specified in the Factor   Specified in the Factor	Specified in the HASP	Specified in the HASP	Specified in the HASP   N = Needs Work	Specified in the HASP   Spec

Transfer Items needing work to this section								
Items needing work	Regulatory or FLD Reference	Corrective Action	Correct by	Corrected	Person Responsible for Correction			

#### **EHS REVIEW CHECKLIST-WESTON FIELD OPERATIONS**

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	Management or Generation of Hazardous Waste*	* Environmental Compliance/Waste Management Plan Required
	Management or Generation of Investigation Derived Waste*	
	Treatment, Storage, or Disposal of Hazardous Waste*	Assure training and site preparation.
	Contingency to prevent or contain hazardous materials or oil spills or discharges to drains, body of water, soil*	
	Disturbing of Asbestos Containing Materials (ACM)*	Assure training and licensing for Asbestos Remediation Activities
	Application of Pesticides or Herbicides*	
	Work on Above or Underground Storage Tanks*	
	Transportation, Storage or Disposal of Radioactive Material*	Assure training and licensing for use of Radioactive Materials/Sources.
	Activities producing or generating Air Emissions (or fugitive "fence-line" emissions) requiring either monitoring and/or permit*	
Y	Excavations, Drilling, Probing or other activities that could impact underground utilities, pipelines, sewer or treatment systems.	Conduct utility locate in all areas where soil gas probes will installed – FLD34
	Shipment of Hazardous Waste off-site* Shipment of Samples in accordance with DOT/IATA	Assure waste identification, manifesting, marking, labeling, placarding.

#### Instructions and Use Criteria:

This form is used to prepare appropriate task/risk analyses (activity hazard analyses) and safety plans. Secondary, but no less important is the use of this form routinely to track changes in jobs/tasks so that workers, public and the environment are adequately protected. In order for this to occur, assure the following:

Review work scope. Considering both safety and productivity break down the job/task and determine 1) How the job/task is to be performed, 2) In what order will the job/tasks be performed, 3) What equipment or materials will be needed, 4) What specific skills or training will be necessary.

Does the work require hot work permits, confined space entry permits, lockout/tagout, other permits or permissions/clearances?

Will it be necessary to barricade for clear work zones (roadway or on-site)?

Of the hazards identified in the table above evaluate risk of injury or damage.

Develop hazard control measures based upon task/risk utilizing protection sequence of:

Engineering design to eliminate hazard/risk.

Substitution of materials/chemicals/methods.

Incorporation of safety devices (e.g., guards, interlocks).

Administrative controls (e.g., work methods, procedures, training).

Provisions for PPE.

Is there any special contingency planning necessary (e.g., rescue, spill control)? People? Procedures? Training?

Have you evaluated and planned job/task to assure acceptable risk for workers, public and environment?

### ATTACHMENT J AUDIT AND OTHER FORMS